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CONRAD, MONTANA

COMPREHENSIVE PLAN

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A COMPREHENSIVE PLAN

for

CONRAD, MONTANA

PREPARED BY

NORTHWEST PLANNERS, INC.
HELENA, MONTANA

Project No. P45-B-1 E-3

Prepared under contract for the Department of Planning and Economic Development, State of Montana, and the Conrad - City - County Planning Board.

The preparation of this plan was financed in part through the Urban Planning Grant from the Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954 as amended.

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NORTHWEST PLANNERS *ASSOCIATED*
MEMBERS: A. I. A., A. S. L. A., A. S. C. E., I. T. E.

June 15, 1971

Conrad-Pondera County
City-County Planning Board
Conrad, Montana

Gentlemen:

We are herewith submitting the Comprehensive Plan for Conrad and its environs. This document includes inventories, analyses, and recommendations in the form of a long range Plan. The Plan is based on standards that are considered adequate to meet the needs of the populus living at present day levels. Schools, hospitals, parks, streets, water, sewer and other facilities serving the people of the community have been planned to serve the needs of the estimated population from the present to the year 2000. Future generations may continue to demand more services resulting in the need for the planned improvements in a shorter period of time than called for in the Plan. For example the 1980 population may require more water per person than the average person living in Conrad at the present time. This will not make the Plan obsolete, it simply means that the planning period will be accelerated and that the 1990 water system may be required to meet 1980 demands.

If the Plan is adopted and used as a guide for the growth of the community, the final product will be a community which resembles the Comprehensive Plan in land use quantities and distribution. This is a community which has an adequate amount of schools, parks, major thoroughfares and utilities with land uses arranged to minimize the intermixing of conflicting uses.

The Plan must be adjusted periodically to take into consideration economic impacts, both positive and negative, which will influence the growth of the community. This is a continuing function of the Planning Board.

The proposed zoning ordinance and subdivision regulations give the administrative bodies the necessary tools to implement the Plan. The Capital Improvements Plan provides a guide for financing major improvements.

It has been a fulfilling experience working with the community in developing this Plan. The List of Credits covers the names of some of the people who helped in the formulation of the Plan but not mentioned are many other individuals who volunteered information or put forth suggestions during the planning period. Our thanks are extended to all individuals who actively participated in this project.

Clete Daily was planner-in-charge of this project.

Respectfully submitted,

N. J. Campeau
President, Northwest Planners Assoc.

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Patrick E. Wyse, County Coroner
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* Includes all councilmen and commissioners serving during the planning project.

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CHAPTER I

INTRODUCTION

INTRODUCTION

The Planning Process

This report has been prepared for the citizens of Conrad and the surrounding area. Its purpose is to provide a tool with which the future growth of Conrad can be directed to form a community which is designed for its residents.

Planning is not new to Conrad. From the days of the layout of the original townsite to the present, most of the improvements constructed in the city have been planned to meet specific immediate and long-range community needs.

The purpose of this study and report is to bring all the physical components that make up the city together and examine the community as a unit. The Comprehensive Plan combines the plans for major projects in the community and relates each specific element to the city as a whole. A long-range plan which interlocks and coordinates the different components is the final result.

The Comprehensive Plan is the output of a desire by the citizens to improve the quality of their community. The plan is formulated in light of objectives determined by the City of Conrad and based on the present environment of the city and the resources available to the community to alter its present state. Because every city, including Conrad, has limited resources at its disposal, a practical rather than an ideal approach has been pursued in the development of the plan.

The Comprehensive Plan is only an intermediate step in the continuous process of community development and improvement. The Comprehensive Plan is the guide that the citizenry should use in developing their community. It is emphasized, however, that planning is a continuing dynamic process requiring reevaluation and refinement as changing physical, social, and financial conditions in the community may require.

Planning Area

Conrad, the county seat of Pondera County, is located in the north central part of the state adjacent to Interstate 15 and the Burlington-Northern north-south rail line. The Conrad Jurisdictional Area is centered at Conrad and extends approximately 4.5 miles from the city limits in all directions.

Goals and Objectives

At the outset of the planning program, the following goals and objectives were adopted by the Conrad City-County Planning Board.

1. Feasibility study of the direction of growth for the city.
2. Utility study to include water and sewer.
3. Solid waste disposal study.
4. City and rural fire protection
5. On and off-street parking.
6. School expansion and development.
7. Economic Study - to include population and industry.
8. Development of the Central Business District.
9. Medical facilities to include need for doctors, dentists and emergency facilities.
10. Street improvements to include traffic flow and widening of streets.
11. Railroad crossings.
12. Recreation and park development (indoors as well as outdoors).
13. Library and city public buildings.

Scope

The following elements make up the scope of services to be provided by the consultant:

1. Base mapping
2. Population studies with forecasts to the year 2000.
3. Economic base study
4. 1970 land use inventory
5. Community facilities.
    (a) Schools

    (b) Parks and recreation areas
    (c) Civic buildings
    (d) Utilities

6. Future land use plan.

7. Housing study.

8. Arterial and circulation element.

9. Regulatory measures

    (a) Zoning ordinance
    (b) Subdivision regulations

10. Capital improvement program.

11. Review.

Broad planning guidelines used in the formulation of the plan and which should be followed by the city in the implementation of the plan are as follows:

Residential Areas:

Residential areas should be buffered from incompatible land uses, such as industrial plants. Residential areas should have close and easy access to schools and parks and, where possible, should be developed with such amenities as their central point of the neighborhood. Major arterial streets should not penetrate residential areas, but where practical, should be readily accessible.

Schools:

School sites should be planned in relation to existing and future pupil population. School sites, where possible, should plend into adjacent marginal uses such as green belts and parks and should not be subject to extensive noise or traffic. Elementary schools should be located near the center of the residential neighborhood which they serve, where small children are not subject to crossing major streets to and from school.

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Recreation:

Recreation areas should be planned to provide adequate and balanced distribution of playgrounds, playfield, and park recreation sites within the community. Where elementary school districts are bisected by major arterials, parks should provide for alternative play areas accessible without crossing major streets.

Commercial Areas:

The Central Business District should be designated to provide the major commercial and office area in the community. Conflicts of pedestrian and vehicular traffic should be minimized with adequate parking being provided. Commercial uses generating large amounts of vehicular traffic or requiring extensive delivery, loading, and warehousing facilities should be located on the fringes of the main business area.

Industrial Areas:

Industrial areas should be planned where there is good access to railroad and major thoroughfares. Heavy industry should be located in areas where service by adequate water, power, and waste-disposal facilities are readily available. Locations for industrial uses should be such that odors, noise, traffic, or smoke generated by these uses is not a nuisance for other uses.

Semi-Public Uses:

Uses such as churches should be readily accessible to the population and where possible be located to form buffer or transitional areas between commercial and residential uses. Institutional activities such as clubs or fraternal organizations should be located in the Central Business District to provide more continuous and advantageous use of facilities, such as parking, during off-peak business hours.

Public Buildings:

Public buildings should be located adjacent to or readily accessible from the Central Business District. Where possible they should be situated to improve community image and act as buffer or transitional areas between commercial and residential uses.

Thoroughfares and Streets:

Streets should be classified by their function as arterials, collectors, or local access, and the street design should reflect this function.

Agricultural Areas:

These areas should be protected from encroachment of urban sprawl by limiting the extension of utilities until available developable land has been consumed.

History

In the early days of Montana history, steamers loaded with trade goods and supplies traveled up the Missouri River from St. Louis to Fort Benton. From here goods were freighted to Canada over the Whoop-Up Trail, an artery between southern Alberta and Fort Benton. The trail was most heavily traveled during the 1870's and was of major importance in opening up the north central portion of Montana.

Over the trail came the white traders, then the cattlemen, later the settlers, and finally the railroads. The railroads played a significant role in the development of nearly all communities in this early period of Montana settlement, and Conrad was no exception to this trend.

Conrad was named after W. G. Conrad, a cattle baron who carved a financial empire in the area. Part of this business empire was the Great Falls and Canada Railway built in 1890. Along this rail line the community of Pondera emerged in 1889 with a store, a rooming house, two saloons, a section house, a school house, and a water tank. In 1901 the Great Falls and Canada Railway was sold to the Great Northern. When standard tracks were laid, Pondera was no longer on the rail line, so its six buildings were moved a mile to the west establishing the town of Conrad. Only a few shacks made up this settlement until 1902, when M. S. Darling, an engineer for the Conrad Investment Company, laid out the original 602 acre townsite. Due to the farsightedness of M. S. Darling, the original townsite has not undergone any change until recently when 26 acres of fringe area were annexed.

By 1905 Conrad had grown to 31 buildings and was described as having wide streets, many young trees, and a foundation to become a "handsome city". On September 24, 1908 the town was incorporated. In 1919 Pondera County was created and Conrad was voted the county seat.

From 1909 to 1912 thousands of farm families settled in the territory and dry land farming became a predominate way of life. The years of 1915 and 1916 were bumper crop years but droughts after 1916 caused many of the 15,000 population in Conrad to seek other employment.

After 1919 the county progressed rapidly. During this early period M. S. Darling conceived the idea to develop a Carey Land Act irrigation project. This project included the requirement that on certain lands, five of every forty acres had to be irrigated in order to obtain patents. Non-irrigable lands were turned over to the government. In 1948 the irrigation system was completed. At present, 80,000 acres of land are served by the irrigation project, which has greatly contributed to the prosperity of the area.

Floods have played an important role in the history of Conrad. In 1908, the Marias River rose 18 feet at its mouth and the flood was described as "the biggest flood ever known state-wide". Another major flood occurred in 1964 and it is expected that it will take three generations to erase the evidence of this tragedy.

Oil was discovered in the Pondera Oil Field in 1927. The "Thirties" affected Pondera County as it did all of the Nation causing banks and businesses to close. Prosperity returned as Conrad became one of the largest producers of crude oil in the state. In 1965, Conrad's population took the biggest jump in its history as the U. S. Bureau of Reclamation established a headquarters to supervise the rebuilding of dams and bridges destroyed by the 1964 flood.

Conrad has continually progressed and today is a major agricultural center. Agriculture, livestock ranching and oil production rank respectively in economic significance in Pondera County.

CHAPTER II

POPULATION & ECONOMICS

POPULATION

General

To properly evaluate present population within the Planning Area it is necessary to consider characteristics of past population data for the planning area, the county, and for the state as a whole. In areas, such as Conrad and Pondera County, where growth rates have fluctuated widely, population forecasts must be based on an in-depth study of the relationship of local population to the population of the surrounding region as well as past and present trends. From such an in-depth study better data may be obtained from which more reliable population forecasts can be formulated.

Population 1970

Population changes in Montana have generally been relatively small. From 1900 to 1920, however, growth in the state was exceptionally rapid, indicative of the homestead and settlement period. Between 1920 and 1930, the decade of the great depression, a small decrease in population was experienced, but since that time steady growth has occurred. A major population increase in the state occurred again between 1950 and 1960 when a 14.1% rate of change was recorded. In the preceeding decade, the state had a moderate 2.9% increase in population with 47,000 new persons bringing the state's total population to 694,409.

Population in Pondera County in 1970 was 6,611 according to the official Census. This was a loss of 1,042 persons from the previous Census in 1960. As indicated in Table 1, population change in the county has been somewhat erratic with losses recorded in the period between 1930 and 1950, a substantial increase between 1950 and 1960 and a loss in the last ten years. The population high was in 1960 when Pondera County had 7,653 residents.

TABLE 1

POPULATION CHANGE AND PERCENT POPULATION CHANGE, 1900 - 1970

Year	State	% of Change	County	% of Change	Conrad	% of Change
1900	243,329	-	-	-	-	-
1910	376,053	54.5	-	-	-	-
1920	548,889	45.9	5,741	-	-	-
1930	537,606	-2.0	6,964	21.3	1,499	-
1940	559,456	4.0	6,716	-3.6	1,471	-1.9
1950	591,024	5.6	6,392	-4.8	1,865	26.8
1960	674,767	14.1	7,653	19.7	2,665	42.9
1970	694,409	2.9	6,611	-13.6	2,770	3.9

Source: U. S. Census

Conrad, the county seat and major center of Pondera County, has had a pattern of steady population growth since its first census in 1930. In that year there were 1,499 persons in Conrad. By 1970, the number had increased to 2,770, an increase of 1,271. Table 1, which also gives the percent change by decade, shows that the city's growth rate in the past ten years was approximately 4%, a figure slightly higher than the statewide average. The rate of increase was considerably less than the 42% gain shown in the 1950-1960 period or in the ten years between 1940 and 1950.

While Pondera County experienced population losses as well as gains during the past fifty years, its share of statewide population has remained remarkably consistent. Table 2 gives the percent of state population located in Pondera County as well as the percent of total county population located in Conrad. In line with state and national trends Conrad has increased its share of county population over the past forty years. Conrad accounted for 21.5% of Pondera County population in 1930 but by 1970 its share had increased to nearly 42%. Although the trend toward urbanization is not as pronounced in Montana as it is in more populous states, Montana's population is becoming more concentrated in a fewer number of places.

TABLE 2

SHARE OF PARENT AREA POPULATION

Year	County % State Pondera	City % County Conrad
1920	1.0	-
1930	1.3	21.5
1940	1.2	21.4
1950	1.1	29.2
1960	1.1	34.8
1970	0.9	41.7

Conrad is the only "urban" area in Pondera County according to the statistical classification of the U. S. Census, which defines "urban" as all incorporated areas over 2,500 persons. The remaining population in Pondera County is considered "rural" by the Census.

Urban population in Montana was 43.7% of the total in 1950. By 1970, it accounted for more than 50%. In Pondera County, urbanization has been somewhat slower with about 42% of the county's 1970 population in that category.

The only other incorporated community in Pondera County is Valier. Table 3 shows the changes in population in Valier as well as pointing out the relative importance of incorporated and unincorporated population. The share of county population living in the unincorporated portions of the county has decreased consistently since 1950. The rate of population decreases in the unincorporated sections of Pondera County, -25.2% was nearly twice the overall countywide rate of -13.6%.

TABLE 3

POPULATION OF INCORPORATED PLACES - 1950, 1960, 1970

Pondera County	1950	1960	1970	% Change 1960-1970
Conrad	1865	2665	2770	3.9
Valier	710	724	651	-10.1
Total Incorporated Area	2575	3389	3421	0.9
Percent Total	40.3	44.3	51.7	
Total Unincorporated Area	3817	4264	3190	-25.2
Percent Total	59.7	55.7	48.3	
Total County Population	6392	7653	6611	-13.6

Source: U. S. Census

The rural, or non-urban, population is categorized as "farm" or "non-farm" by the Census. The latter includes people living in incorporated areas under 2,500 population as well as those in suburban areas. The farm component of rural population has been declining for a number of years throughout the country as well as in Montana. This decline of farm population is a reflection of the mechanization of agriculture and the fewer, but considerably larger, farm units.

The non-farm portion of rural population in Montana increased from 59 to 72% between 1950 and 1960. Data from the 1970 Census is not yet available but there is little doubt that this trend has continued. In contrast to the state as a whole, the non-farm portion of rural population in Pondera County decreased between 1950 and 1960. Again no figures are available for 1970, but in light of the relatively large population decrease in the county and the trend toward greater population concentration in Conrad, it is fairly certain that the non-farm portion of rural population decreased between 1960 and 1970.

TABLE 4

COMPOSITION OF RURAL POPULATION

	PONDERA COUNTY			MONTANA - % ALL RURAL	
Year	Total Rural	Non-Farm	Rural Farm	State	Pondera County
1950	6,392	3,529	2,863	59.2	55.2
1960	4,988	2,315	2,673	71.6	46.4
1970	3,841	N.A.	N.A.	N.A.	N.A.

Source: U. S. Census

Changes in population by census division between 1960 and 1970 are shown in Table 5. With the exception of Conrad, all divisions in Pondera County registered a population decrease in the past ten years.

TABLE 5

POPULATION OF PONDERA COUNTY BY CENSUS DIVISIONS, 1960 AND 1970

	1960	1970	% Change
Pondera County	7,653	6,611	-13.6
Conrad Division	2,665	2,770	3.9
Conrad City	2,665	2,770	3.9
Conrad Rural-Brady Division	2,450	1,761	-28.1
Valier-Dupuyer Division	2,538	2,080	-18.0
Valier Town	724	651	-10.1

The increasing destabilization of the rural population and the increasing importance of urban areas is emphasized. The above analysis points out the importance of Conrad as the primary population center for Pondera County. In light of the availability of utilities, the improvement of highways, and the A.B.M. installation; the continued concentration of Pondera County population within Conrad can be expected.

Population Characteristics

Birth rates across the country have declined dramatically since 1960. In most agriculturally oriented areas, such as Pondera county, there has been an out-migration of people in the child-bearing, child-raising age groups. This out-migration is partly due to farm unit consolidation and a corresponding decrease in employment opportunities. The decline in birth rates and the out-migration of population is noted in Table 6 and is visually evident in the comparison of the population pyramids for 1960 and 1970, Figures 1 and 2, respectively.

The number of persons less than five years old in 1970 decreased substantially in the state as well as in Pondera County. The number of pre-school children (those under five) in the state declined by about one-third while those in Pondera County declined by nearly 50%. Table 7, which shows the actual changes between 1950 and 1960, and between 1960 and 1970, notes that the number of pre-schoolers in Pondera County declined by 665.

Young elementary school population (those between five and nine years) declined both in the state and in the county. This decline was less than the decrease for the under five age group. This decline is probably due to out-migration as well as decreased birth rates. In the older elementary and junior high school age group (ten to 14 years) the state experienced a 17% increase while the county population for this age group remained essentially the same.

Population of high school age, 15 to 19 years, increased in the state and in Pondera County. In the state the 1960 to 1970 gain was approximately 40% while in the county it was slightly less than 20%.

Between 1960 and 1970 there was a substantial gain in the state in the number of persons in the college and young working age level, 20 to 24 years. This increase amounted to 11,944 people, or 30%. In the same period, Pondera County lost 83 persons, or 21%, in this age bracket. The decrease can be accounted for by the increase in the number of persons seeking to further their education beyond the high school level. The large increase in state-wide population in this age group suggests that higher education opportunities have increased substantially in Montana, but outside of Pondera County.

In the 25 to 34 year age category the state as a whole showed a slight decrease of 732 persons for 1960 to 1970 period. As shown in Table 7, this age group also declined in the 1950 to 1960 period. The decrease for the 1960 to 1970 period amounted to less than 1%, while between 1950 and 1960 the out-migration for this age group reached nearly 10%. On the other hand, in Pondera County the decrease for the 1950 to 1960 period was less than 10%, but it rose to over 23% for the 1960 to 1970 period. An absolute decrease of 218 people in the age group has occurred in Pondera County since 1960. These figures indicate that while employment opportunities may have improved within the state in the last ten years, employment opportunities for this age group have decreased in Pondera County.

TABLE 6

DISTRIBUTION OF MAJOR AGE GROUPS

	STATE				PONDERA COUNTY			
	1960		1970		1960		1970	
Age	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Under 5	83,102	12.3	57,054	8.2	1,016	13.3	566	8.6
5 - 9	77,048	11.4	72,258	10.4	974	12.7	712	10.8
10 - 14	67,042	9.9	78,618	11.3	836	10.9	842	12.7
15 - 19	50,767	7.5	70,346	10.2	629	8.2	665	10.0
20 - 24	39,578	5.9	51,522	7.4	388	5.1	305	4.6
25 - 34	80,611	12.0	79,879	11.5	909	11.9	691	10.5
35 - 44	85,975	12.8	74,998	10.8	952	12.5	761	11.5
45 - 54	73,274	10.8	77,837	11.2	768	10.0	741	11.2
55 - 64	51,950	7.7	63,161	9.1	542	7.1	659	10.0
65 +	65,420	9.7	68,736	9.9	639	8.3	669	10.1
Total	674,767	100.0	694,409	100.0	7,653	100.0	6,611	100.0

Source: U. S. Census

TABLE 7

CHANGES IN MAJOR AGE GROUPS

Age Group	STATE 1950 - 1960	STATE 1960 - 1970	PONDERA COUNTY 1950 - 1960	PONDERA COUNTY 1960 - 1970
Under 5	14,901	-26,048	132	-450
5 - 9	21,691	- 4,790	279	-262
10 - 14	20,508	11,576	265	6
15 - 19	10,127	19,579	168	36
20 - 24	- 2,138	11,944	- 37	83
25 - 34	- 8,860	- 742	- 96	-218
35 - 44	5,360	-10,977	165	-191
45 - 54	12,400	4,563	176	- 27
55 - 64	- 4,802	11,211	1	147
65 +	14,556	3,316	208	30

The same absence of employment opportunities was undoubtedly a factor in the population loss in the 35 to 44 year age group during the last decade in both the state and in Pondera County. Losses amounted to 10,977 persons, or 16% for the state and 191 people, or 29% for Pondera County. These losses contrast with the population gains made in this age group during the 1950 to 1960 decade.

Between the ages of 25 and 44, people have been leaving not only Pondera County, but also the state as a whole. This out-migration is partially the result of a lack of employment opportunities. It is also explained by the ability of this age group to be absorbed into the corporate and industrial system outside of Montana.

The state showed a gradual increase for the age groups 45 to 54 years, and 55 to 64 years. Pondera County has a small decrease in the 45 to 54 year age group and a significant increase of persons between 55 and 64 years of age. These population changes are partially the result of a recent awareness of the pressures of big city living and a desire to return to the more natural environment of the small community. The rather substantial increases in the 55 to 64 age group includes a number of people who have already retired from one career, such as military or other government service, and who find it economically feasible to live in the rural community on their retirement pensions. In many cases these people have also established small business enterprises to supplement their retirement and have thus added to the economic stability of the community.

Pondera County showed an increase of 30 persons in the number of people in the retirement age group (65 years and older). A comparison of the dependency ratios for 1960 and 1970 show 45.3% and 42.4% respectively. The dependency ratio gives a rough measure of the number of people in the "active" ages (15 - 64) compared to those in the dependent ages (10 - 14 and 65+). Presumably, the lower the ratio the more productive the population because of a lower dependency load. Thus, the percentage of persons capable of being self-supporting appears to have increased in the county in the last decade.

Montana is a state populated by relatively young people in comparison to much of the country. In 1950 the median age was 29.7 years, in 1960 it was 27.4 years, and by 1970 it had dropped to 26.6 years. The median age can be expected to rise if the present decline in birth rates continues.

In 1970 the median age in Pondera County rose well above the state's median age for the first time in 20 years. This sharp rise is due both to the large out-migration of young people from the county and also to the large decline in pre-school children.

TABLE 8

MEDIAN AGE

	1950	1960	1970*
State	29.7	27.4	26.6
County	26.7	24.8	27.6

*Estimates of median age derived from first count data - U. S. Census 1970

Source: U. S. Census

In response to the decreased birth rates and the out-migration of people in the 25 to 34 year old age bracket, the average number of persons per household in Montana dropped from 3.25 in 1960 to 3.20 in 1970. The 1970 figure for Pondera County of 3.30 was higher than the state-wide figure but much lower than the previous county figures in 1950 and 1960 of 3.55 and 3.63, respectively.

Figure 1 Pondera County Age and Sex Distribution 1960

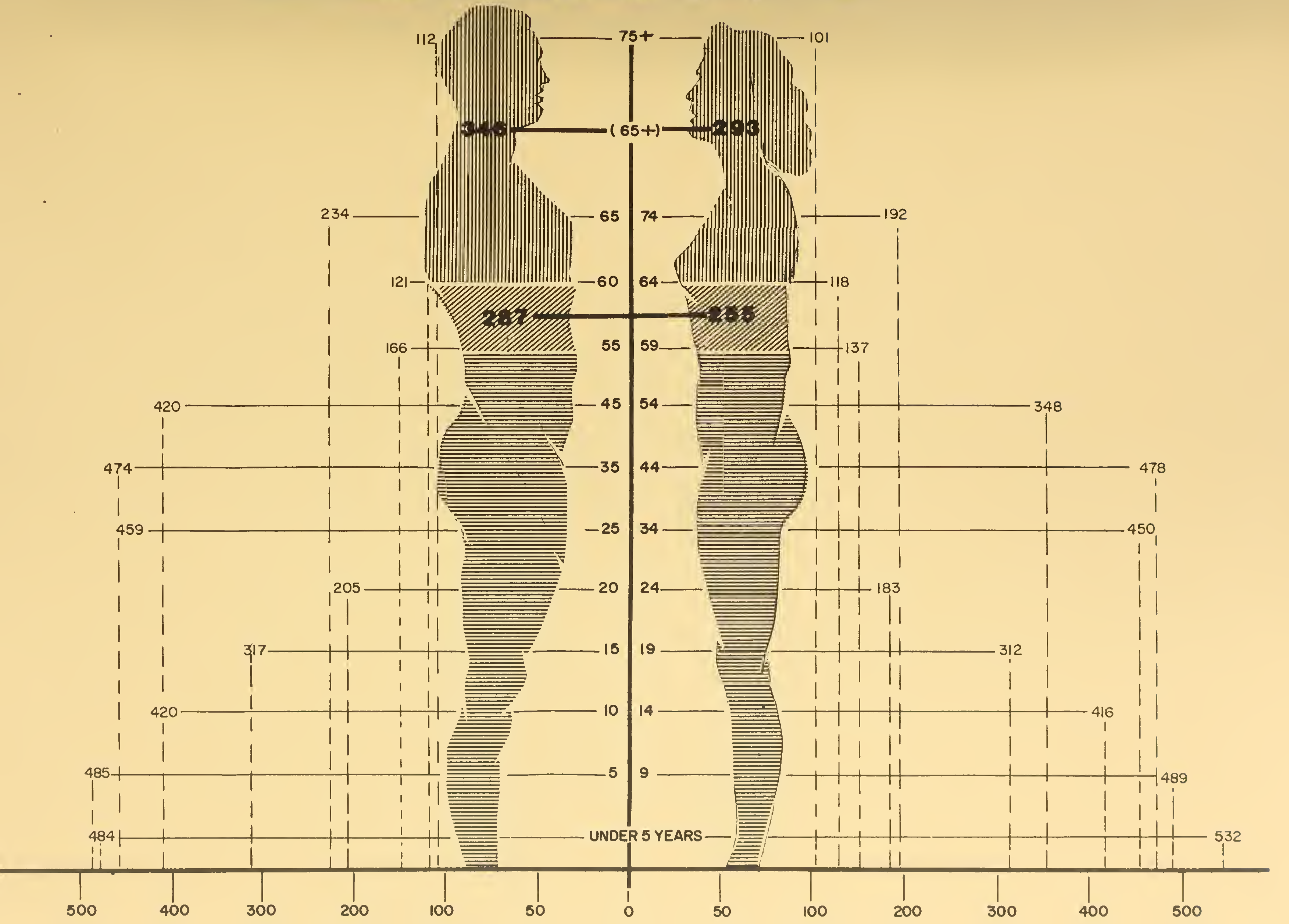

Figure 2 Pondera County Age and Sex Distribution 1970

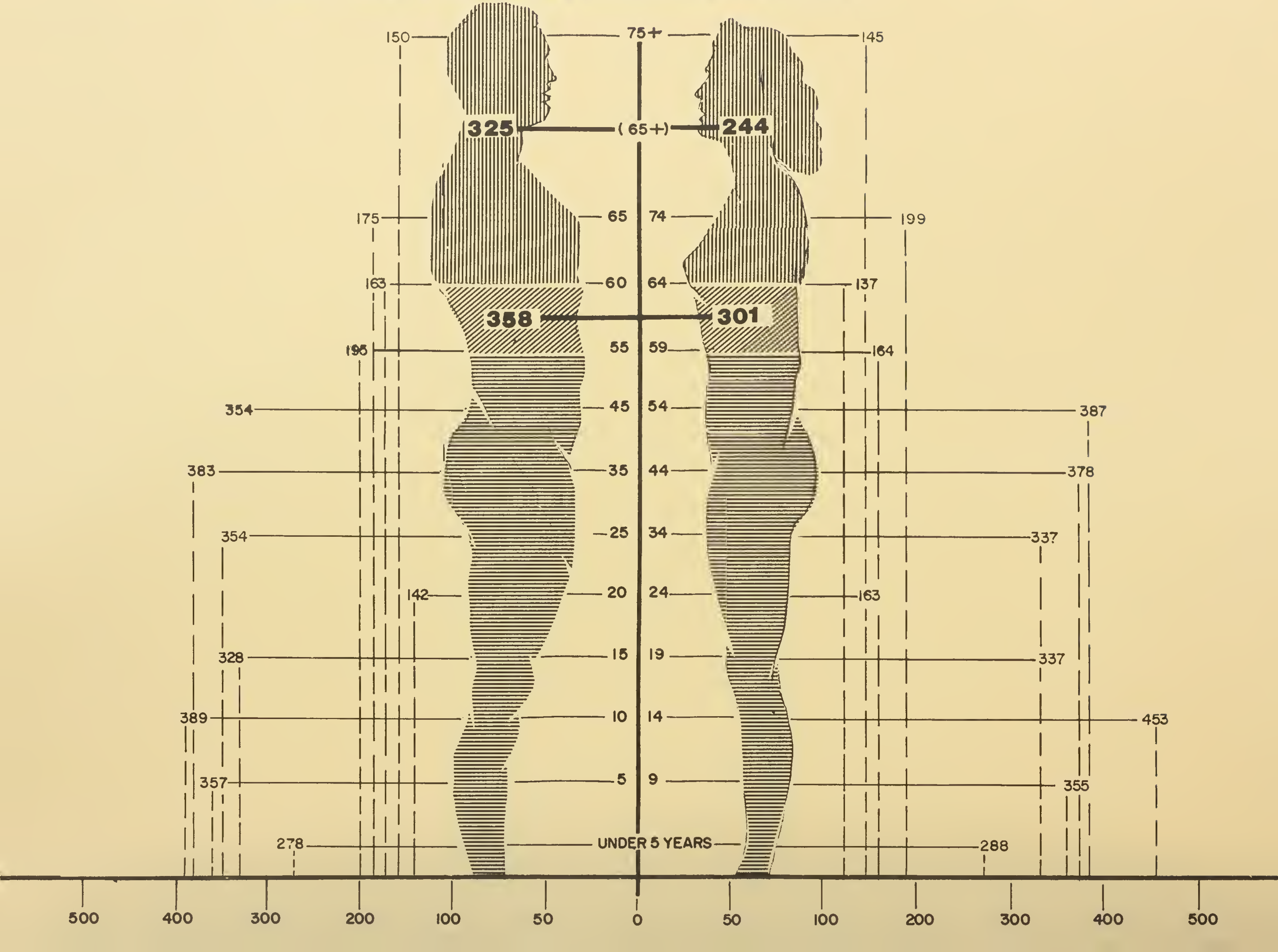

TABLE 9

PERSONS PER HOUSEHOLD

	1950	1960	1970
Montana	3.22	3.25	3.20
Pondera County	3.55	3.63	3.30
Conrad	N.A.	3.22	3.03

Source: U. S. Census

The decrease in population for Pondera County resulted in a lowering of the overall population density of the county. The number of persons per square mile in the county was 4.0 persons in 1970. Overall population density for Pondera County has generally been lower than that of the state as a whole.

TABLE 10

POPULATION DENSITY

	Persons Per Square Mile	
Year	State	Pondera County
1950	4.0	3.9
1960	4.6	4.6
1970	4.7	4.0

Source: U. S. Census

Population throughout the nation is becoming more mobile and the fact that Pondera County lost population between 1960 and 1970 and is now gaining population as a result of the A.B.M. installation is evidence of this mobility. In 1970, 47% of the people in Montana lived in a different residence than they did in 1955. The 1960 figures for Pondera County indicate a similar mobility.

TABLE 11

PLACE OF RESIDENCE IN 1960

	State	County
Different house than in 1955	47%	39%
Different county than in 1955	20%	14%
Different state than in 1955	10%	6%

Source: U. S. Census

Income Data

Median income in Pondera County has been substantially higher than that of the state in the past. In 1959, the state-wide median income was exceeded by $1,521.00 in Pondera County. As indicated in Table 12, the change in family income between 1949 and 1959 was considerable in both the state and the county.

TABLE 12

MEDIAN INCOME

	1949	1959	Change	% Change
Montana	2,727	4,502	1,755	39
Pondera County	3,411	6,023	2,612	43

Source: U. S. Census

Table 13 gives the number of families in each income group in 1959 and the change that occurred in each group between 1949 and 1959. The table indicates how median income has increased, with fewer families in the lower income bracket and increasing numbers in the middle and high income categories. The increase in the number of families in the income brackets over $7,000.00 for the state was substantially higher than the increases in those income categories in Pondera County. The number of families with income between $7,000.00 and $9,999.99 increased by 340% in the state while in Pondera County a gain of less than 1% was made.

TABLE 13

NUMBER OF FAMILIES BY INCOME GROUP, 1959

Income Group	State Number	State % Change 1949-59	Pondera County Number	Pondera County % Change 1949-59
$0 - $2,999	73,908	-30.4	384	-59.8
$3 - $4,999	48,643	-14.0	481	-14.9
$5 - $6,999	45,722	155.5	374	133.8
$7 - $9,999	32,418	340.8	176	0.6
$10,000 +	19,792	258.6	250	28.2

Source: U. S. Census

Data on median income or the number of families in each group is not yet available from the 1970 Census. In order to get a general picture of the changes that have occurred, data from the 1969 issue of Sales Management, a marketing magazine, was used. This source makes yearly estimates of income and sales. The estimates for 1969 are shown in Table 14 which gives the percent of families by income group.

Assuming the Sales Management estimates are reliable, the general trend evident between 1949 and 1959 has continued with a smaller proportion of families in the lower income groups and a corresponding larger share in the higher brackets. Income distribution for Pondera County is generally comparable to that for the state as a whole. A slight variance occurs in that the county has a higher percentage of families in the $5,000.00 to $6,999.00 income bracket and a lower percentage of families in the $7,000.00 to $9,999.00 income category than does the state as a whole. Although the percentage of families in the county with less than $3,000.00 income per year is similar to the state figure, the percentage of families in this category has not substantially changed in the county for the past ten years.

TABLE 14

PERCENT OF FAMILIES BY INCOME GROUP

	$0 - $2,999	$3 - $4,999	$5 - $6,999	$7 - $9,999	$10,000 +
State					
1949	54.9	29.2	9.2	3.8	2.9
1959	33.4	22.5	20.6	14.6	8.9
1965	22.3	14.2	26.6	14.6	22.3
Pondera County					
1949	46.5	27.6	7.8	8.6	9.5
1959	23.1	28.9	22.4	10.6	17.0
1965	22.6	15.0	28.1	11.3	23.0

Source: U. S. Census - 1949 and 1959

Sales Management - 1969

Population Estimates for Montana

Changes in the population of the State of Montana over the past 70 years are recorded in Table 15. The table shows that the state had a substantial rate of growth between 1900 and 1920. Following this, in the 1920 - 1930 decade, there was a slight population decline which amounted to 11,283 persons, or about 2%.

Since 1930, the state has shown moderate population gains in each successive Census period. Although the rate of increase in these periods has been less than that experienced by the nation as a whole, the trend in the state has generally paralleled that of the country. Like the United States, Montana had a period of relatively large population increase between 1950 and 1960, followed by a reduced rate of growth in the past ten years.

TABLE 15

MONTANA POPULATION CHANGE, 1900 - 1970

Year	Population	Change	% Change
1900	243,329		
1910	376,053	132,724	54.5
1920	548,889	172,836	45.9
1930	537,606	-11,283	-2.0
1940	559,456	21,850	4.0
1950	591,024	31,568	5.6
1960	674,767	83,743	14.1
1970	694,409	19,642	2.9

Source: U. S. Census

The statewide increase since 1930, amounted to 156,803 persons. In terms of growth rate, this was a 29.1% gain, or an average of 7.5% per decade. In view of the increase between 1960 and 1970 and the generally decreased birth rate across the United States, it is not likely that this high percentage increase per decade can be sustained through the year 2000, the target year of the following estimates.

Forecasts of future population by state have been prepared by the U. S. Bureau of the Census. The latest of these forecasts was prepared in 1968, two years before the actual Census count in 1970. The estimates for 1970 were considerably higher than the actual count. The Census Bureau estimates for the states generally did not anticipate the greatly reduced birth rates of the 1960's. The Census Bureau estimates for Montana are shown in Table 16.

TABLE 16

ESTIMATES OF MONTANA POPULATION TO 1985 (000)

Year	I-B	II-B	I-D	II-D
1970	725	728	716	719
1975	764	771	734	740
1980	817	819	762	773
1985	879	897	800	816

Source: U. S. Census Bureau, Current Population Reports, Series P-25, 1968

The four estimates reflect different assumptions. Series I assumes a continuation of present migration rates, while II assumes that gross migration rates will converge. Series B assumes a moderate decline in birth, while Series D assumes a substantial decline in coming years. Of the four forecasts then, I-D which assumed a continuation of the migration rate of the 1955 - 1960 period and a substantial decline in birth, was more in line with the changes that are occurring. Even this forecast, however, over-estimates the state's 1970 population by 22,000 persons.

Other estimates of future population have been prepared by the National Planning Association and the Montana Department of Planning and Economic Development. The National Planning Association estimates are similar to those of the Census Bureau in that the forecasts for the individual states are derived from control totals for the United States as a whole, distributed by Region and then allocated to each state of the Region. The National Planning Association estimates for Montana are higher than those of the highest Census Bureau series, with 774,000 persons forecast for 1980.

The estimates of future population prepared for the Department of Planning and Economic Development by the University of Montana Bureau of Business and Economic Development are based on a more thorough analysis of the employment potential of the state. This source concludes that there will be continued out-migration, at least through 1980 because not enough new jobs will be created to absorb the state's own natural increase in population. The estimated 1980 population, according to this source, will be 725,000 people, approximately 31,000 more than recorded in the 1970 Census.

The fact that each analysis has produced different results points to the problems of estimating future population levels. This is particularly true of a state like Montana and even more true of its subdivisions where a change in government policies on the use of natural resources, such as timber or minerals, or the gain or loss of a few industries or large businesses can have more far-reaching consequences than in the more populous states. In using the following forecasts then this should be kept in mind. The estimates are intended to provide general guides for framing development policies. These policies must be flexible enough to accommodate unforeseen change.

Table 17 presents estimates of Montana population by 5-year intervals to the year 2000. Two forecast methods have been used. The first applies the percentage increases utilized by the Census Bureau in its lowest estimate, I-D, to the rate figure of the actual 1970 Census count. From 1985 through the year 2000, an average growth rate, derived from the Census estimate figures is used.

The second method utilizes the 1980 figure forecast by the Bureau of Business and Economic Research. From 1980 through 2000, the figures are based on the 1970 - 1980 growth rate. For comparison, the estimate of the National Planning Association for 1980 has been extended to 2000 by the same method.

TABLE 17

ESTIMATE OF MONTANA POPULATION TO THE YEAR 2000

Year	Natl. Plng. Association	Bureau of Bus. & Econ. Resch.	Census Bureau Adj.	Difference BBER & CB
1970	694,400	694,400	694,400	
1975	734,000	709,000	711,800	2,800
1980	774,000	725,000	739,800	14,800
1985	818,000	740,000	775,800	34,900
1990	862,200	756,900	804,500	47,600
1995	881,400	773,500	834,300	60,800
2000	900,500	790,200	865,200	75,200

The differences between the adjusted Census Bureau estimate and that of the Bureau of Business and Economic Research are minor through 1980, the period of greatest concern for this analysis. Beyond that time a number of unforeseen variables could affect the projections. The estimates of state population that have been used as the basis for the forecasts for Pondera County and Conrad are median figures of the two.

Region II Forecasts

The State of Montana has been divided for statistical and analysis purposes into regions by the Department of Planning and Economic Development. These regions, which are based on studies of the University of Montana Bureau of Business and Economic Research, are relatively homogeneous areas in terms of economy, land use and a number of other factors.

Pondera County is included in Region II, North Central Montana, which encompasses a total of 14 counties. Most of the land in this region is devoted to farming and ranching. Great Falls is its largest city and major trade center. The Bureau of Business Research expects that there will be only a small rise in employment and consequently a decline in population in Region II in the coming decade. The 1980 population estimate for Region II is 167,700.

In 1960, Region II made up 25.3% of the state population. By 1970, this percentage had declined to 24.2. Assuming the Bureau of Business Research's state and regional population estimated for 1980 are valid, the share of state population in this area by that year will be 23.1%.

Table 18 presents estimates of Region II population through the year 2000. The estimates of the Bureau of Business Research for 1980 have been incorporated. After 1980, it has been assumed that the Region's share of Montana population will range between the Bureau's low estimate for 1980 and the high figure attained in 1960. The figures for state population in the table are the medians between the low Census-based series and the estimates based on the Bureau of Business Research study presented in the preceeding section.

TABLE 18

ESTIMATES OF REGION II POPULATION TO THE YEAR 2000

Year	State	Region II
1950	591,024	141,772
1960	674,767	171,191
1970	694,409	168,400
1975	710,400	168,600
1980	731,400	168,900
1985	758,400	182,800
1990	780,700	188,100
1995	803,900	193,700
2000	827,800	198,500

County Population Forecasts

Table 2 in an earlier section pointed out the relatively close relationship between the population of Pondera County and the state over the past sixty years. Pondera's share of Montana population has varied only between 0.9 and 1.3%.

The share of Region II population in Pondera County has also been within relatively close limits although it has declined since 1950. In that year, Pondera had 4.5% of Region II's population. In 1970 it had 3.9%.

Forecasting future population of small areas on the basis of their past relationships to larger areas is tenuous. However, the method is no more uncertain than trying to base population estimates on anticipated economic and employment changes in an area or by extrapolating past trends. Methods of estimating employment or extrapolating past trends are especially untrustworthy in areas, such as Pondera County, which have had basically only an agricultural background and a small and widely fluctuating population. The step-down ratio method that is used here has the virtue of relating changes expected in the larger, parent area to the local level. The anticipated A.B.M. impact in the region reinforces the validity of this method.

Table 19 presents estimates of Pondera County population to the year 2000. The estimates in the Table are derived from the preceeding forecosts of Montana and Region II population. It is assumed that Pondera County will continue to share the population changes of the parent area as it has in the past. Although the share of Region II's population located in Pondera County has declined since 1950, the installation of the A.B.M. complex could generate sufficient local employment to halt this trend and stabilize the relationship of the county to the region.

TABLE 19

ESTIMATES OF PONDERA COUNTY POPULATION TO THE YEAR 2000

Year	State	Region II	Pondera County State Est.	Pondera County Region Est.
1950	591,024	141,772	6,392	6,392
1960	674,767	171,191	7,653	7,653
1970	694,409	168,400	6,611	5,839
1975	710,400	168,600	7,980	7,080
1980	731,400	168,900	8,210	7,090
1985	758,400	172,200	8,510	7,680
1990	780,700	174,900	8,770	7,900
1995	803,900	178,500	9,030	8,130
2000	827,800	182,900	9,300	8,330

Table 19 notes a 1980 population ranging between 7,090 and 8,210 for Pondera County. By the year 2000, the population of Pondera County, according to the highest forecast figure, will reach 9,300. For planning purposes the high forecast figures have been utilized in determining the population liable to locate in the major community of Conrad.

Conrad Population Estimates

The statewide Sewer and Water Plan, which was prepared by Theodore J. Wirth, and Associates and Mueller Engineering and financed by the Farmers Home Administration, contained estimates of future population for all communities included in the study. These estimates, which were computed before construction of the A.B.M. complex in Pondera and Toole Counties was announced, projected a 1980 population of 3,080 persons for Conrad. By 1990, the same source expected the city's population to reach 3,400 persons.

This estimate of 1980 and 1990 population for Conrad will undoubtedly prove low since it does not take into account the impact of the A.B.M. installation. Defining the impact on the economy and population that the A.B.M. construction and operation will have on Conrad is difficult since there are conflicting figures and opinions on the number of jobs created, on the disposition of housing for permanent military personnel and the possibility of new roads being built which would make Shelby and other communities more accessible to the A.B.M. site.

Data from the Corps of Engineers Community Impact Report, July 1970, shows that Conrad could expect a permanent population of 5,755. The basis for this estimate is shown in Table 20 which

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Year	State	Region II
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The share of Region II population in Pondera County has also been within relatively close limits although it has declined since 1950. In that year, Pondera had 4.5% of Region II's population. In 1970 it had 3.9%.

Forecasting future population of small areas on the basis of their past relationships to larger areas is tenuous. However, the method is no more uncertain than trying to base population estimates on anticipated economic and employment changes in an area or by extrapolating past trends. Methods of estimating employment or extrapolating past trends are especially untrustworthy in areas, such as Pondera County, which have had basically only an agricultural background and a small and widely fluctuating population. The step-down ratio method that is used here has the virtue of relating changes expected in the larger, parent area to the local level. The anticipated A.B.M. impact in the region reinforces the validity of this method.

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Data from the Corps of Engineers Community Impact Report, July 1970, shows that Conrad could expect a permanent population of 5,755. The basis for this estimate is shown in Table 20 which reproduces the figures of that report. The same source estimates the temporary impact population during construction, 1971-1975, to reach 6,980 in Conrad and some 12,000 in the entire affected area.

TABLE 20

PERMANENT POPULATION INCREASE TO CONRAD FROM A.B.M. INSTALLATION

	Conrad	Total Impact Area
Primary Population[1]	~~730~~ 230	1,220
Secondary Population[2]	2,255	4,050
1970 Population	2,770	71,900
Permanent Population	5,755	77,170

[1] Does not include military personnel and dependents according to Page IV-1 of Corps of Engineers Report.

[2] At 2.7 persons per worker.

A memorandum to the state A.B.M. Coordinating Committee from the Department of Planning and Economic Development, dated March 11, 1971, presented revised figures for temporary and permanent impact population of 7,360 and a permanent population of 6,320 in Conrad from the A.B.M. installation.

TABLE 21

A.B.M. COORDINATING COMMITTEE ESTIMATE OF TEMPORARY AND PERMANENT IMPACT POPULATION

	Temporary	Permanent
Workers		
Primary Impact	895	479
Secondary Impact	805	835
Population		
Primary Impact	2,416	1,273
Secondary Impact	2,173	2,254
Current Population	2,770	2,770
Total Population	7,359	6,317

This same memorandum noted that 417 residents with an estimated population of 1,126 persons would be part of the M.S.R. site installation. At this date it has not been determined whether this housing will be located on site or in Conrad. If the latter occurs, the permanent population figure would be approximately 7,400 persons according to the quoted source, a figure which corresponds to the peak population is shown in Table 21.

The analysis of past population in a previous section pointed out several trends that are expected to continue and which are reflected in the estimate of Conrad population shown in Table 22 which follows. These include a continued decrease in unincorporated and a corresponding increase in incorporated area population, a more or less static population in Valier, the only other city in the county, and a growing share of Pondera County's people located in Conrad.

TABLE 22

ESTIMATES OF CONRAD POPULATION TO THE YEAR 2000

Year	County	Uninc. Area	Conrad
1950	6,392	3,817	1,865
1960	7,653	4,264	2,665
1970	6,611	3,190	2,770
1975	7,980	2,790	3,970
1980	8,210	2,390	5,170
1985	8,510	2,090	5,750
1990	8,770	1,790	6,330
1995	9,030	1,610	6,820
2000	9,300	1,340	7,310

Table 22, which assumes that the 1960-1970 rate of decrease in the unincorporated area continues at least through 1985 and a constant population in Valier, shows a target year population of 7,310 persons. This is comparable to the peak construction period population expected in 1970-1971. It is also comparable to the permanent population expected if the M.S.R. housing is located in Conrad. The post-construction population, 1980, is estimated at 5,170, some 600 below the estimate of permanent population prepared by the Corps of Engineers and presented in Table 20.

The population estimates for Conard in the immediate post-construction period, 1975-1980, are as follows:

Corps of Engineers	5,755
A.B.M. Coordinating Committee	6,317
Past Trends	5,170

The long-range population growth estimates foresee the potential of some 7,310 people in Conrad. This population is likely if the decision is made to provide military housing in Conrad rather than on-site.

While the estimates present a rather wide range, the differences are not crucial in terms of dimensioning the major plan elements on the vital utilities, such as sewer or water. The plan should be dimensioned to fit the maximum population expected, but expansion of land use areas and the provision of needed improvements should be staged to fit the financial capability of the community.

FIGURE 3

POPULATION

PAST AND FUTURE

MONTANA

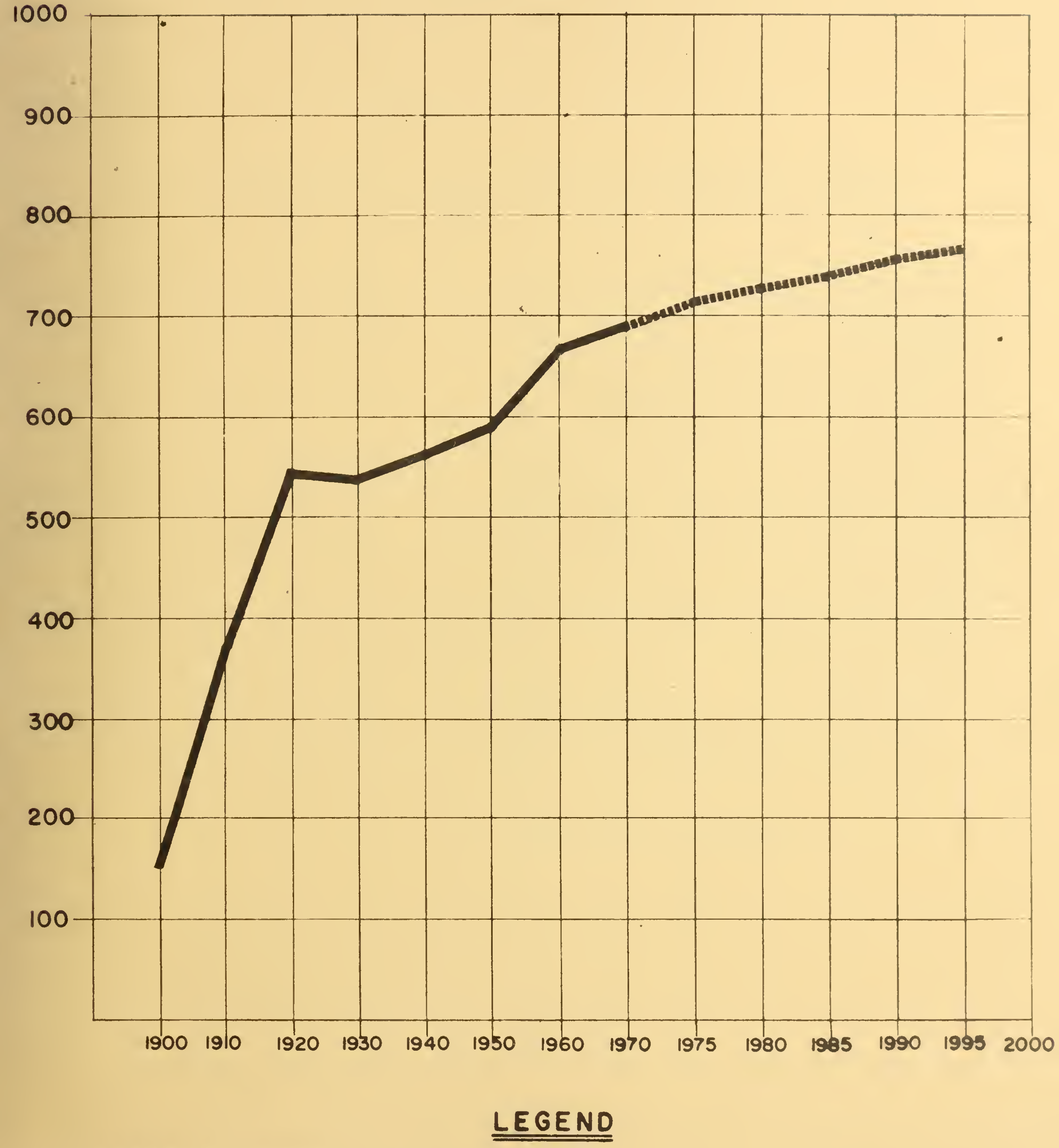
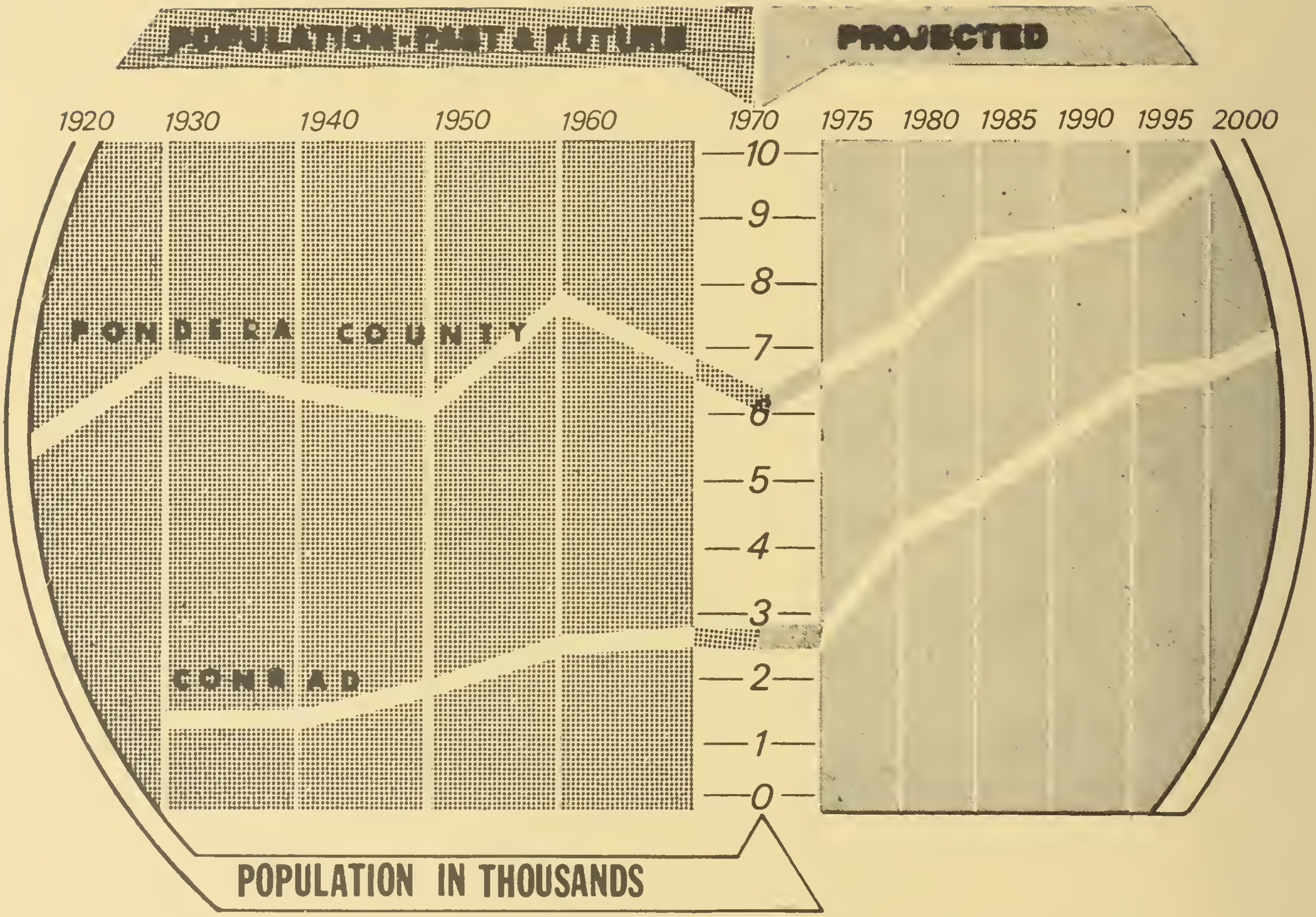


FIGURE 4


POPULATION-PAST & FUTURE
PROJECTED
1920
1930
1940
1950
1960
1970
1975
1980
1985
1990
1995
2000
10
9
8
7
6
5
4
3
2
1
0
PONDERA COUNTY
CONRAD
POPULATION IN THOUSANDS

LABOR FORCE AND EMPLOYMENT

The labor force in Pondera County numbered 2,709 persons in 1960. This was approximately 35 percent of the county's population in that year. The percentage of population in the labor force, or participation rate, was somewhat lower than the rate in 1950 in the county. In both years the labor force participation was below the statewide figure. The county's labor force increased by 360 workers in the 1950-1960 period. This was a gain of 15 percent. The population increased by almost 20 percent in this time.

The increase in the county's labor force was due to a large extent to the increased number of females considering themselves part of the work force. Males in the labor force increased by 144 while the number of females increased by 226 between 1950 and 1960. As indicated in Table 23, the male labor force grew by 7.4 percent while the female component had a 52 percent gain. The rate of increase of the female sector of Pondera's labor force was considerably higher than the 44 percent gain statewide.

Conrad, which made up 34 percent of Pondera County's 1960 population, accounted for 38 percent of its labor force. There were 1,064 persons included in Conrad's labor force in that year. More than a third were females, a percentage that was greater than either the county or state in that year. The labor force participation rate, 39.9 percent, was also higher than that of Pondera County or Montana.

Over 95 percent of the city's and 97 percent of the county's labor force was employed in 1960. Total employed in Conrad numbered 1,014 while in the county the employed labor force numbered 2,614 persons. The unemployed rate in both the city and the county was considerably lower than that of the state. Approximately two-thirds of the employed in Conrad were males, a percentage lower than either the county or state in that year.

Current data on labor force and employment is not yet available. There is no doubt, however, that there has been a decrease in the county's labor force corresponding to the population loss of approximately 1,000 persons between 1960 and 1970. Conrad's labor force, on the other hand, has probably remained essentially the same because of the population gain of 105 persons.

Estimates of the 1970 and future labor force are given in Table 24. For 1970 the table assumes a slightly lower participation rate, reflecting the higher percentage of dependent age persons among the population. The 1970 labor force in Conrad is estimated at 1,052 with employed at 1,003. For Pondera County the corresponding figures are 2,247 and 2,134.

TABLE 23

LABOR FORCE CHARACTERISTICS

	Conrad	County		State	
	1960	1950	1960	1950	1960
Population	2665	6392	7653	591,000	674,700
Labor Force (L.F.)	1064	2349	2709	232,150	254,400
L.F. - % Population	39.9	36.7	35.4	39.3	37.7
Males in L.F.	679	1933	2077	181,250	181,000
Females in L.F.	385	416	632	50,900	73,400
Females - % Total	36.2	17.7	23.3	21.9	28.9
% Chg-Male L.F.	-	-	7.4	-	-0.1
% Chg-Female L.F.	-	-	51.9	-	44.2
Employed L.F.	1014	2279	2614	218,500	231,300
% Total L. F.	95.3	97.0	96.5	94.1	90.9
Male Employed	661	1879	2023	169,900	163,200
Female Employed	353	400	591	48,600	68,100
Male - % Total	65.2	82.4	77.4	77.8	70.6
Unemployed	50	70	95	13,650	23,100
% Labor Force	4.7	3.0	3.5	5.9	9.1
Male Unemployed	18	54	54	11,850	17,800
Female Unemployed	32	16	41	2,300	5,300

Source: U. S. Census

TABLE 24

LABOR FORCE ESTIMATES

	1960	1970	Maximum ABM Impact	1980	2000
Pondera County					
Population	7653	6611	7500	7080	8330
% in Labor Force	35.4	34.0	38.0	35.0	34.0
No. in Labor Force	2709	2247	2850	2870	3170
No. Employed (95%)	2614	2134	2710	2720	3010
Conrad					
Population	2665	2770	7360	5170	7310
% in Labor Force	39.9	36.0	40.0	35.0	34.0
No. in Labor Force	1064	1052	2940	1800	2480
No. Employed (95%)	1014	1003	2790	1710	2360

Table 24 also presents estimates of the labor force for the years 1980 and 2000 as well as for the early 1970's, the time of maximum expected impact of the ABM missile installation activity. The population figures for the latter period were discussed in the population section.

The estimates assume that labor force participation rates in both the county and city will increase during this construction period because of job availability as well as a higher proportion of working age people in the population. After that time, however, the percent of population in the labor force is expected to decline in line with state and national trends.

The city's labor force is expected to be approximately 1,810 in 1980. By the year 2000 it is expected to reach 2,480. The corresponding figures for Pondera County are 2,720 and 3,010.

Occupational Composition of the Labor Force

The occupational composition of the employed labor force in Pondera County and Conrad in 1960 is shown in Table 25. In the city the most important occupantions numerically were the professional, clerical, managerial and service--in that order. In Pondera County, the on-farm occupations, farmers and farm laborers, made up almost 38 percent of the employed. The most important occupations following the farm-related ones were professional, craftsmen and service.

The table also notes the change between 1950 and 1960 for Pondera County. The 1950 data for Conrad is not available. The table notes that the on-farm occupations combined dropped 15 percent in the period. In actual numbers this amounted to 91 jobs. Except for cales occupations, all other categories showed an increase in this time. The most significant increases were in the professional, clerical, operative and service fields. The number of professional workers increased by 124, clerical by 77, operatives by 66, and service workers by 61.

Data on the occupational structure of the employed labor force in 1970 is not yet available from the 1970 Census. It is likely that the 1950-1960 trends evident in the county have continued with the farm occupations decreasing and the more specialized urban-type occupations showing an increase.

TABLE 25

OCCUPATIONAL COMPOSITION OF EMPLOYED LABOR FORCE 1960

Occupation	City No.	City Percent	County No.	County Percent	1950-60 % Chg.-Cty.
Professional	165	16.3	264	10.1	88.6
Manager	136	13.4	226	8.6	10.2
Clerical	137	13.5	202	7.7	61.6
Sales	58	5.7	107	4.1	-14.4
Craftsmen	105	10.4	221	8.5	8.9
Operatives	82	8.1	192	7.4	52.4
Private Households	48	4.7	67	2.6	219.0
Service	114	11.2	223	8.5	37.7
Laborers	46	4.5	85	3.3	1.2
Farmers	64	6.3	693	26.5	-4.5
Farm Laborers	35	3.5	298	11.4	-11.0
Not Reported	24	2.4	36	1.3	37.0
Total	1014	100.0	2614	100.0	14.7

Employment by Major Industry

Employment by major industry in Conrad and Pondera County in 1960 is shown in Table 26. The most important employers in the city in that year were the trade and service industries. Together they accounted for 599 employees, or 59 percent of the total. The only other industry category with a significant number of employees was the agriculture, forestry and fisheries group. Manufacturing played a very minor role with only 32 employees in that category.

In Pondera County the agriculture, forestry and fisheries industry group was the most important one in terms of employment. Almost 40 percent of the county-wide total employment was included in this classification. Services and trade followed with 20.6 and 18.9 percent of the total respectively.

The table also shows the change in county employment by industry between 1950 and 1960. Similar data for Conrad is not available. In the 1950-1960 decade there was a decrease of 49 workers in agriculture and 17 in construction. All other categories showed a gain, with the greatest gains in service and trade. The former increased by 55 percent, or 190 employees, while there was a 24 percent increase in trade. The actual number of employees in trade grew by 96. There were substantial percentage increases in finance, insurance and real estate and manufacturing in this time too. In actual employment they represented increases of 32 and 25 workers respectively.

Data on employment by industry is not available yet from the 1970 Census. It seems probable that the trends evident in Pondera County between 1950 and 1960 have continued.

TABLE 26

EMPLOYMENT BY MAJOR INDUSTRY, 1960

Industry	City No.	City Percent	County No.	County Percent	1950-60 % Chg-County
Agric., Forestry, Fisheries	107	10.6	1019	39.0	-4.6
Mining	30	3.0	66	2.6	24.5
Construction	53	5.2	102	3.9	-14.3
Manufacturing	32	3.1	60	2.3	71.4
Trans., Communication, Utilities	62	6.1	141	5.4	27.6
Trade	282	27.8	502	18.9	23.6
Finance, Ins., Real Estate	55	5.4	71	2.7	82.1
Service	317	31.3	537	20.6	54.8
Public Administration	56	5.5	88	3.4	22.2
Not Reported	20	2.0	28	1.2	-3.4
Total	1014	100.0	2614	100.0	14.7

Source: U. S. Census

Table 27 gives some insight into the changes since 1960. It shows employment by major industry based on information from the publication County Business Patterns which appeared in the Montana Data Book, a report of the Department of Planning and Economic Development.

The data from County Business Patterns relies on information from the unemployment compensation agencies of the various states. It is related then to place of work rather than place of residence as is the Census. The two sets of data then are not strictly comparable. The County Business Patterns data also tends to under estimate employment since not all industries and not all employers are covered by unemployment compensation. This probably accounts for the low figure for Services in Table 5 since the service industry is characterized by small owner-operated establishments.

Undoubtedly the 1968 figures are not precise and total employment is probably underestimated in the table. The estimated 1970 Pondera County total employed labor force, shown in Table 24, would place the number of employed at about 2,100. The table does indicate, however, that all categories of employment except public administration have decreased since 1968.

TABLE 27

PONDERA COUNTY EMPLOYMENT BY MAJOR INDUSTRY, 1960 AND 1968

Industry	1060[1] No.	1060[1] Percent	1968[2] No.	1968[2] Percent
Agric., Forestry, Fisheries	1019	39.0	424	24.2
Mining	66	2.6	27	1.5
Construction, Mft., Other[3]	190	7.4	194	11.1
Trans., Communication, Utilit.	141	5.4	65	3.8
Trade	502	18.9	453	25.8
Finance, Ins., Real Estate	71	2.7	44	2.5
Public Administration	88	3.4	379	21.5
Total	2614	100.0	1755	100.0

[1] U. S. Census.

[2] County Business Patterns and Montana Data Book.

[3] Grouped to conform to withheld data in County Business Patterns.

Components of the Economy

Agriculture - Agriculture has been the most important single factor in the economy of Pondera County and Conrad in the past. Not only do the farms and ranches of the county generate employment and income in the county, but they also make possible the businesses and other economic activities in Conrad. Conrad's major economic function has been that of the trade and service center for the surrounding agricultural area.

The data on employment by industry and occupations pointed out the decrease in on-farm employment. This trend has been occurring for several decades in the state and nation as well as Pondera County. The factors of increased farm mechanization, larger farm units needed for efficient operation and the increasingly larger capital investment required for successful agricultural operations have all acted to reduce farm manpower requirements. This has also acted to reduce the number of farm units.

The number of farm units in Pondera County decreased by 86 between 1954 and 1964. In the latter year there were 610 farm units recorded by the Census of Agriculture. In this same period, the average acreage per farm unit increased from 1,278 to 1,510, an increase of 232 acres. In 1964, 211 of the 574 reporting units were larger than 500 acres and 48 of these were larger than 1,000 acres.

The major crops in Pondera County were wheat, barley and hay. Wheat accounted for 54 percent of the harvested acreage in 1964, while barley made up a third and hay ten percent of the 275,800 acres. In actual acres the amount devoted to wheat was 149,300 and to barley 92,000 acres. Acreage devoted to wheat increased by about 9,000 acres between 1959 and 1964. The amount in barley decreased by about the same amount.

Most of Pondera County's farms are cash grain farms, with wheat the major crop. The only other significant types are livestock farms and livestock ranches. Two-thirds of the county's farms were of the cash grain type in 1964. In 1959 these farms made up 75 percent of the total. As indicated in Table 28, there was a marked decrease in the number of cash grain farms between 1959 and 1964. The number of livestock farms increased by 31 in this time.

TABLE 28

FARMS BY TYPE

Type	1959	1964
Cash Grain	490	430
Livestock Farms	81	118
Livestock Ranches	30	38
General	8	17
Other	38	37
Total	647	648

Source: U. S. Census

Almost all of the farms in Pondera County are considered commercial farms. In 1964 there were only 35 non-commercial farm units out of 610 reporting. These consisted of part-time and retirement farms. As indicated in Table 29, more than a third of the commercial farms had sales in excess of $20,000 in 1964. There were 53 farms with sales greater than $40,000.

TABLE 29

FARMS BY ECONOMIC CLASS

Class	Sales	1959	1964
I	40,000 +	39	53
II	20-39,999	148	155
III	10-19,999	211	194
IV	5-9,000	120	113
V	2,500-4,999	53	42
VI	50-2,499	8	18
All Commercial		579	575
Other		38	35

Source: U. S. Census

Crops made up the largest portion of the value of farm products sold in Pondera County in 1959 and 1964. The value of crops sold in 1964 amounted to $8.6 million, while livestock sales amounted to $2.5 million. Almost all of the latter was accounted for by livestock specifically with dairy and poultry sales making up only a fraction of the total. In the 1959-1964 period the value of all farm products sold increased by some $986,000. Two-thirds of this increase was the result of increased livestock sales which showed more than a $660,000 gain. The value of crops sold increased by some $324,000.

TABLE 30

VALUE OF FARM PRODUCTS SOLD

	1959	1964
All Crops	$ 8,314,127	$ 8,638,171
All Livestock	2,026,791	2,688,072
Poultry	64,047	68,694
Dairy	45,079	81,216
Livestock	1,917,665	2,538,162
Total	$10,340,918	$11,326,243

Source: U. S. Census

According to the *Montana Economic Study*, prepared by the University for the Department of Planning and Economic Development, the factors which influenced agriculture in the recent past can be expected to continue. Larger farm units will be required to accommodate technological improvements and the increasing capital investment requirements. Further declines in agricultural employment can be expected because of this as well as increased production with resulting price reductions and pressure on profits. This source estimates that total employment in agriculture will decline from the 33,700 estimated in 1968 to 26,000 by 1980 for the state as a whole.

In Pondera County corresponding decreases in on-farm employment can be expected. For Conard this will mean fewer farm families within its trade area. The need to diversify the economy is obvious.

Manufacturing - Manufacturing has not been a very important segment of the Pondera County-Conrad economy in the past. The 1960 Census showed only 32 manufacturing workers in the city and 60 in the county. The county's manufacturing employment made up only 2.3 percent of the total in that year.

The 1968 Census of Manufacturers reported four manufacturing establishments in Pondera County. These included one food and kindred products, one printing and publishing and two in the stone, glass and clay category. According to County Business Patterns data none of these establishments employed more than 20 persons.

During the installation of the A.B.M. facilities in Pondera County, manufacturing employment is expected to increase. Those workers involved in the actual installation of the missiles are classified as manufacturing workers. Previous missile site construction and installation activity in Montana has not had noticeable side or spin-off effects in generating more manufacturing employment. All of the manufactured components are produced outside the state. This is likely to be true of the A.B.M. facility under construction.

Except for the permanent workers employed directly on the A.B.M. sites, the prospects for increased manufacturing employment in Conrad or Pondera County are slight. The lack of non-agricultural raw materials and distance to markets make it unlikely that manufacturing employment will ever be more than a relatively minor factor in the economy.

Trade - Conrad has been the trade and service center for the surrounding farm area ever since its beginning. The importance of trade to the local economy is shown by the fact that employees in this category made up over 27 percent of all employment in 1960. The drawing power of the city's retail trade facilities also create opportunities for professional and service activities that are located there. The future level of economic activity in Conrad will largely be a reflection of its ability to compete for the trade and service dollars generated by the permanent population affiliated with the A.B.M. complex.

As shown in Table 31, sales, payroll and employment in retail trade increased in the county between 1958 and 1967. The number of establishments decreased. The increase in sales amounted to more than $2.8 million, a gain of 23 percent. While earlier data for the city is not available, it is apparent that much of the sales and other increases took place in Conrad. In 1967 the city accounted for 60 percent of the county establishments and 82 percent of all sales.

Data on sales and establishments by type is presented in Table 32. Except for food and eating and drinking place sales, the sales figures for Conrad have been withheld to avoid disclosure. The city's food sales made up 77 percent of the county's in 1967 and 74 percent of the sales in eating and drinking places. With the high percentage of total sales and total establishments located in the city, it seems likely that most of the sales in individual categories were made in Conrad.

Table 32 also shows the changes in sales and establishments countywide between 1958 and 1967. Categories which list establishments including building materials, gas stations, apparel shops, eating and drinking places, drug stores and non-store retailers. Sales decreases were recorded in the apparel and drug categories. All others showed an increase with building materials, food and automotive dealers having the largest gains.

TABLE 31

RETAIL TRADE DATA

	1958	1967
Pondera County		
Establishments	112	93
Sales (000)	11,868	14,674
Payroll (000)	1,076	1,586
Total Employment	478	551
Conrad		
Establishments	N.A.	57
Sales (000)	N.A.	12,041
Payroll (000)	N.A.	D
Total Employment	N.A.	D

N.A. - not available
D - Withheld to avoid disclosure

Source: U. S. Census

TABLE 32

SALES* AND ESTABLISHMENTS BY TYPE, 1967

Type	Conrad Estab.	Conrad Sales	County Estab.	County Sales	County 1958-67 Increase Estab.	County 1958-67 Increase Sales
Bldg. Materials	12	D	15	4895	-8	618
General Mchse.	4	D	6	939	2	275
Food	6	2059	10	2695	2	656
Automotive	3	D	7	2131	0	584
Gas Stations	6	D	8	649	-3	35
Apparel	3	D	4	184	-5	-229
Furniture	2	D	2	D	2	D
Eat-Drink	13	564	24	758	-8	133
Drug	2	D	3	505	-1	-45
Other	6	D	13	1384	5	D
Non-Store	D	D	1	D	-1	D
Total	57	12,041	93	14,674		

*Sales in thousand $

In 1967, the year of the latest Census of Business, the city had an estimated population of 2,740 and the county a population of 6,925. The per capita dispensable income in that year is estimated at 1900 (based on 1966 data, OEO Community Profile for Pondera County), of which about 65 percent was available for retail trade purchases. The total amount available for retail trade purchases in the county was $8,517,700. In Conrad it was $3,370,000.

The comparison of actual sales with those potentially available from the local population, shown in Table 33, points out the fact that both city and county are attracting considerable retail trade from beyond their respective boundaries. In the case of Conrad, more than $8.6 million of its 1967 retail trade was attracted from outside the city. More than $6.1 million of Pondera County's trade came from beyond the county. The city's sales exceeded the potential generated by its population by 252 percent while in Pondera County the corresponding figure was 173 percent.

TABLE 33

AVAILABLE AND ACTUAL SALES, 1967

	County	City
Available Retail $	8,517,700	3,370,000
Actual Sales	14,674,000	12,041,000
Difference	6,156,300	8,671,000
Percent of Potential	+ 173	+ 252

What about the future retail sales level? Completion of the interstate and improvement of other routes in the area will make the state's larger urban centers, particularly Great Falls, more accessible and more attractive in the future. It is doubtful then that the city and county can maintain their present level of sales attraction. Nevertheless, expected population growth and generally higher incomes expected because of the technical and professional personnel attached to the A.B.M. complex should mean a continued high level of sales. This depends also, to a large degree, on the effectiveness of local merchandisers and the steps taken to insure an attractive and efficient business area.

Estimates of future city retail sales are presented in Table 34. These estimates should be considered as rough approximations for they are based on the per capita sales attained in 1967. As noted above, sales exceeded the potential generated locally by a wide margin. Therefore, while the method is crude, it is probably no less accurate than trying to adjust for changing disposable personal income, the relationship of sales to this and probable changes in the trade area population.

The estimates show that sales of $32 million are expected during the time of peak construction on the A.B.M. facility. This same figure is estimated for the year 2000 when the city is expected to reach a permanent population of the 1971-1973 level. In 1980 sales of $22.6 million are forecast.

TABLE 34

ESTIMATES OF FUTURE CITY SALES[1]

	Peak ABM	1980	2000
Population	7,360	5,170	7,310
Sales (000)	32,310	22,696	32,090
Square Feet[2] (000)	538	378	534

[1] Based on 1967 per capita sales of $4,390.

[2] Based on average of $60 sales per square feet for all retail types.

The table also presents estimates of retail space. The estimates assume an overall productivity level of $60 per square foot for all retail types. It should be noted that it is possible and preferable for stores to operate at higher productivity levels for short periods and that it would be unwise to increase the square footage to meet crash demands, such as the missile site construction period. For 1980 the estimated floor space to accommodate the expected sales volume is 378,000 square feet. By the year 2000 approximately 534,000 square feet of space will be required.

In addition to its role in retail trade, Pondera County has a substantial wholesale trade. There were 28 wholesalers in the county in 1967. The total sales of these establishments was more than $19 million. The inventory of wholesale establishments included five merchant wholesalers with 1967 sales of $1,7 million and 23 other operating types with sales in excess of $17 million. Table 35 shows that wholesale sales more than doubled in the 1958-1967 period.

TABLE 35

WHOLESALE TRADE DATA, PONDERA COUNTY

	1958	1967
Establishments	31	28
Sales (000)	9,037	19,035
Payroll (000)	254	450
Employment	60	89

Services - The service trades have been attracting a larger portion of the consumer's dollar in recent years. In many areas where retail sales have dropped, service receipts have held their own or even shown an increase.

This has not been the case in Pondera County, however. Despite the area's retail and wholesale sales attraction, service receipts have not shared in the gains. Table 36, which gives data for the county's service establishments in 1958 and 1967, shows that there were decreases in all aspects of service activity. The 1967 sales were 587,000, some 270,000 less than in 1958. Employment also showed a significant drop.

The 1958 data for Conrad is not available. The city, however, accounted for a major share of the county's establishments and more than 90 percent of its receipts. City receipts in 1967 amounted to $544,000.

TABLE 36

SERVICE TRADE DATA

	1958	1967
Pondera County		
Establishments	43	42
Receipts (000)	857	587
Payroll	187	114
Employment	136	55
Conrad		
Establishments	N.A.	34
Receipts (000)	N.A.	544
Payroll	N.A.	D
Employment	N.A.	D

N.A. - Not available.
D - Withheld to avoid disclosure.

Source: U. S. Census

The inventory of service establishments in Pondera County and Conrad is shown in Table 37.

TABLE 37

SELECTED SERVICE ESTABLISHMENTS, 1967

Type	City	County
Hotels, Motels	7	11
Personal Services	12	14
Misc. Business Services	4	4
Auto Repair Services	4	4
Misc. Repair Services	5	6
Amusement, Recreation	2	3

Source: U. S. Census

Despite the losses incurred in the 1958-1967 period, it is likely that there will be an increase in service activity and employment in the future. This should be generated by the ABM facility as well as by the city's location on the north-south interstate. The attraction exerted by Conrad's retail functions should also create opportunities for expansion of the service activities.

Estimates of Future Employment

Estimates of future employment in Conrad and Pondera County are presented in Table 38. The basis for these estimates are the forecasts of employed labor force presented in an earlier section. The 1980 employed labor force forecasts for Conrad and Pondera County were 1,710 and 2,730 respectively. By 1980 the county's employed labor force is expected to reach 3,000, while that in Conrad is forecast at 2,360.

The estimates take into consideration the past distribution of total employment among the major industries as well as the trends which have been discussed.

Of all the trends affecting employment, the most important one will be the continued decrease in employment in agriculture. About 39 percent of Pondera County's employment was in this field in 1960. By 1980 the share is expected to decrease to 30 percent and by the year 2000 the agricultural, forestry and fisheries sector is expected to make up about 19 percent of total employment. Agricultural employment in Pondera County in 1980 is forecast at 820, while in the year 2000 it is expected to be 590.

Mining equipment is expected to remain at the current level. Moderate employment increases are forecast in all other categories. The major employment gains are expected in trade, service and public administration. The 1980 employment in these industries is forecast at 610, 620 and 110 respectively.

The same three categories are expected to show corresponding increases in Conrad. Both trade and service presently account for the major portion of the city's employment, and they are expected to assume a larger share in the future. Trade, which made up about 27 percent of the total employment in Conrad in 1960 is expected to make up about 30 percent in 1980. Services are expected to account for a third of all employment in that same year.

The forecasts for trade employment are 520 workers in 1980 and 720 by the year 2000. Service employment in 1980 is forecast at 560 and by 2000 is expected to reach 790.

Other categories of employment, except agriculture and mining, are expected to have moderate employment gains.

TABLE 38

ESTIMATES OF FUTURE EMPLOYMENT

Industry	County 1980	County 2000	City 1980	City 2000
Agriculture, Forestry, Fisheries	820	590	140	120
Mining	70	60	30	20
Construction	110	150	90	130
Manufacturing	110	160	70	120
Transportation, Comm., Utilities	170	190	120	180
Trade	610	750	520	720
Finance, Insurance, Real Estate	100	140	90	130
Services	620	810	560	790
Public Administration	110	160	90	150
Total	2,720	3,010	1,710	2,360

CHAPTER III

PHYSICAL CHARACTERISTICS & NATURAL RESOURCES

PHYSICAL CHARACTERISTICS

Land Ownership and Use

Pondera County covers 1,654 square miles, or approximately 1,058,560 acres of land. The largest percentage of land in the county is in private ownership amounting to 44% or about 465,280 acres. Federal land holdings in the county amount to approximately 264,960 acres, or 25% of the land area with an equal amount of land devoted to the Blackfeet Indian Reservation in the extreme western part of the county. State and local governments own the remaining 6%, or 63,360 acres of the county.

Agricultural pursuits are the predominant uses of land in Pondera County. The percentage and acreage of each use in the county are listed in Table 39.

TABLE 39

COUNTY LAND USE

Use	Acreage	% of Total Use
Cropland*	561,092	53.4
Pasture*	15,630	1.5
Range	310,728	29.6
Forest (Private Lands)	28,669	2.7
Urban uses and rights-of-way	13,595	1.3
Federal non-cropland (forest)	111,182	10.6
Small water areas**	2,727	0.3
Other	7,897	0.7
	1,051,520	100.0

*Part of this total includes 79,413 acres of irrigated land.

**Water areas from two to 40 acres in size.

Source: Montana Data Book

Topography

Topography in Pondera County ranges from 7,500 to 8,000 feet above sea level along the western mountainous boundary of the county to 3,100 feet at the Marias River along the northern county line. The county generally slopes eastward and northward changing in character from mountainous areas in the west to arable plains in the central and eastern portions of the county. The City of Conrad rests at 3,520 feet above sea level in the central part of the county.

Climate

The climate in the plains region of Pondera County can be classified as modified continenal, which is characterized by moderately warm summers and moderately cold winters. Cold northern air masses move through this area in winter but seldom remain for more than several days without a "chinook" interruption. Chinook warm winds are common during the winter in areas east of the Continental Divide from Canada to New Mexico. Easterly winds prevail throughout the year.

Precipitation at Conrad ranges from 5.8 inches to 19.5 inches, averaging 12.08 inches per year. Of the 12.08 annual average total from 1935 to 1964, 79% or 9.49 inches fall during the April-September growing season. Little more than half falls during the May-July three month period, which is most important to the growth of grains and grasses. Winter precipitation in Conrad is generally light with less than one-half inch per month from November through March usually in the form of snow. Average yearly snowfall is about 40 inches and seldom does snow depth exceed more than several inches.

Summer weather in the Conrad area is rarely hot and oppressive. The average temperature for July and August has been 65.9 degrees for a 30-year period, beginning in 1935. Most days are characterized by bright sunny mornings giving way to partly cloudy skies in the afternoon. Extremes, however, have been noted, such as 105 degrees in 1961. The average length of the growing season (which consists of those days over 32 degrees) is 109 days, beginning May 28 as an average date of the last freeze, to September 14 as an average date of the first freeze.

Water

Water and irrigation has been a significant factor in contributing to the stable economic base of the county. Water resources consist of Swift Reservoir with a capacity of 30,000 acre feet of water and Lake Francis with a capacity of 112,000 acre feet of water. About 70,000 acres of irrigable land is watered from Lake Francis which also is the source of water for the City of Conrad. Swift Reservoir is used for irrigation in the upper Birch Creek drainages.

The Marias River is the major drainage feature of Pondera County. Other principal drainages are Birch, Blacktail, and Dupuyer Creeks, which are fed by many smaller mountain streams, all generally flowing northeastward where they join with Cut Bank Creek to form the Marias River. Pondera (Antelope) Creek in the southeast part of the county generally flows southeastward into Teton County and eventually drains into the Teton River.

Ground water aquifiers are present in much of Pondera County at shallow depths and are widely used in the central and eastern parts of the county as a source of water for both agricultural and domestic purposes. The City of Valier obtains its municipal water from ground water sources.

Soil

Nearly all of Pondera County is covered by material which was transported by glaciers and deposited as "till". This glacial "till" has been altered by climate, fauna, and flora to produce the soil types found today. The parent "till" was made up of primarily sedementary rock material. Of the sedimentary rock types underlying the soil and the parent glacial material, shale and sandstone predominate in the east while limestone is most abundant in the western part of the county, especially at higher elevations. The characteristics of depth, density, porosity and texture as well as the chemical properties of a soil are determined by the interaction of the parent material with topographic, climatic, and vegetative conditions.

The most widely represented soil groups in Pondera County are alluvial, brown, chestnut, chernozem, solodized-solonetz, grumusul, and grey wooded. Alluvial soils were laid down by water erosion and are usually found adjacent to rivers and streams in areas subject to flooding. The brown, chestnut, and chernozem soils are the most widely distributed soil groups in the county. These soils generally have a dark surface, a clayey prismatic subsoil, and a zone of lime accumulation usually present 10 to 15 inches below the surface. The chernozem soil group has developed in areas of greater precipitation, and is darker in color than the brown or chestnut soil groups. Because of its depth and fertility, the chernozem group is sometimes called the "king of soils". Solodized-solonetz soils usually have a thin surface and a distinct claypan subsoil that is very hard when dry. The upper part of this soil type is light colored (bleached) and usually one to four inches thick. This soil group is associated with the brown, chestnut, and cheronzem soil groups in the plains areas of the county. Stunted plant growth is often ascribed to the solodized-solonetz soil group due to its generally alkaline condition. The grumosol soils develop deep, wide cracks when they are dry. These soils contain large amounts of clay and are very sticky and plastic when wet and then become very hard when dry. The gray-wooded soils are found in the western portions of the county and are typically covered with coniferous trees.

NATURAL RESOURCES

Coal

Bituminous coal occurs in a belt ranging from six to 16 miles wide beginning about 30 miles south of Choteau and extending through Pondera County to the Canadian Border. Coal has been mined near Valier from beds up to 3-1/2 feet thick. Coal was first used for private consumption but was later (1908) mined commercially. During the peak of the commercial operations, as many as 125 men were employed.

Oil and Gas

Oil was discovered in 1927 in Pondera County in a geological formation known as the Sweet Grass Arch. This discovery led to the establishment of the Pondera Oil Field which lies in an area southwest of Conrad and estends into a small portion of Teton County. There are presently 273 producing wells in this field which have produced 18,579,784 barrels for a cumulative value of $36,478,816.00 Other oil fields in the county are the south Conrad field, with one producing well, and the Gypsy Basin field with four producing wells. Gypsy Basin was opened in 1958 and is located west of Conrad and borders on Teton County. There are no gas wells currently producing in the county.

TABLE 40

CRUDE OIL PRODUCTION - PONDERA COUNTY*

Name of Field	No. of Wells	Cumulative to 1/1/70 Barrels	Cumulative to 1/1/70 Value	Cumulative to 1/1/70 Remaining Reserves
Brady - Midway (South Conrad)	2	44,371	$ 104,065	NA**
Gypsy Basin	4	157,457	334,303	NA
Pondera	273	18,579,616	36,579,788	2,255,000
Total	279	18,781,616	$37,018,156	2,255,000

*Source: Oil & Gas Conservation Commission

**Not Available

Secondary recovered oil is becoming a major factor in the Montana crude oil picture and has added significantly to the nearly one million barrel increase in production calculated for the northern portion of Montana for 1964. Secondary recovery projects are in operation in the Pondera and Gypsy Basin fields.

Timber

Pondera County has 111,182 acres of Lewis and Clark National Forest land located in the western parts of the county. These forest lands were established in 1897 with ownership and management being consolidated into the present forest system in 1932.

Timber cutting in what is now national forest land began in the early 1880's and supplied only local needs. By 1886, organized timber harvests were being conducted along Badger Creek and in 1899 a sawmill was built on the south fork of Dupuyer Creek. The need for building material and fuel for the railroads stimulated much of the early timber cutting. Over the past several decades little logging activity has occurred as many areas of commercial timber are inaccessible or too scattered to be economically feasible. There is no commercial timber on private lands in Pondera County.

CHAPTER IV

LAND USE INVENTORY

LAND USE INVENTORY

General

The land use inventory provides insight into the character of the Planning Area in terms of land usage and building distribution and density. Evaluation of existing streets, public facilities, residential neighborhoods, and commercial and industrial areas is determined by analyzing land use inventory data in conjunction with population levels and planning standards. This inventory and evaluation are two of the basic input elements for determining the land use plan. The future location and improvement of streets, public facilities, neighborhoods, and other community activities must, in some measure, reflect the continuation and improvement of the existing developments.

In the fall of 1970 a land use survey was conducted throughout the entire 72.5 square mile Conrad Jurisdictional Planning Area. The various types of land use that existed were plotted on field sheets and aerial photographs; the land area recorded; and for commercial, industrial, and public buildings the floor area was measured. This data was tabulated and then platted on three land use maps; one for the central city area of Conrad; one covering the entire jurisdictional area outside the central city; and a non-reproducible map presented to the City of Conrad showing land use by parcel within the city limits.

Tabulations and analysis of the jurisdictional Planning Area have been conducted on two levels; one, the jurisdictional area outside the city; and two, the area within the corporate city limits of Conrad. This distinction was undertaken because of the political division that exists between city and county and to aid the dissemination of specific information to both of the area's governing bodies. Summation tables for the Planning Area as a whole are included.

Jurisdictional Land Use

The Conrad Jurisdictional Planning Area occupies 46,400 acres of which only 2,042.1 acres, or 4.4%, has been developed. The rest of the land is either vacant or used for agricultural endeavors. A visual inspection of the area reveals that most land use activities are located within the City of Conrad. Of the developed acreage in the Planning Area, however, only about 25% is located within the city limits. Thus, although fewer activities are carried on outside of the city, more acreage is needed for their execution. Table 41, lists the acreage and percentage calculations for the various uses in the entire Planning Area while Table 42 lists similar data for the area outside the City of Conrad.

Most developed land uses in the non-corporate area are oriented to serve the extensive agricultural community and are thus widely dispersed throughout the planning area. Residential development, which makes up 19.7% of the developed land outside the city, consists mainly of scattered farmsteads. Few suburban homes or subdivisions have located in the non-corporate area due to a lack of sewer or water utilities outside of the city. Only three commercial establishments have located outside the city and these consist mainly of businesses which require large tracts of land for storage purposes or parking. The majority of industrial development, however, has occurred outside the city and consists mostly of agriculturally oriented businesses such as grain elevators. Some clustering of industrial uses has occurred along the Burlington-Northern tracks just west of the city with the other industrial uses generally locating further north or south of the city adjacent to the main railroad line.

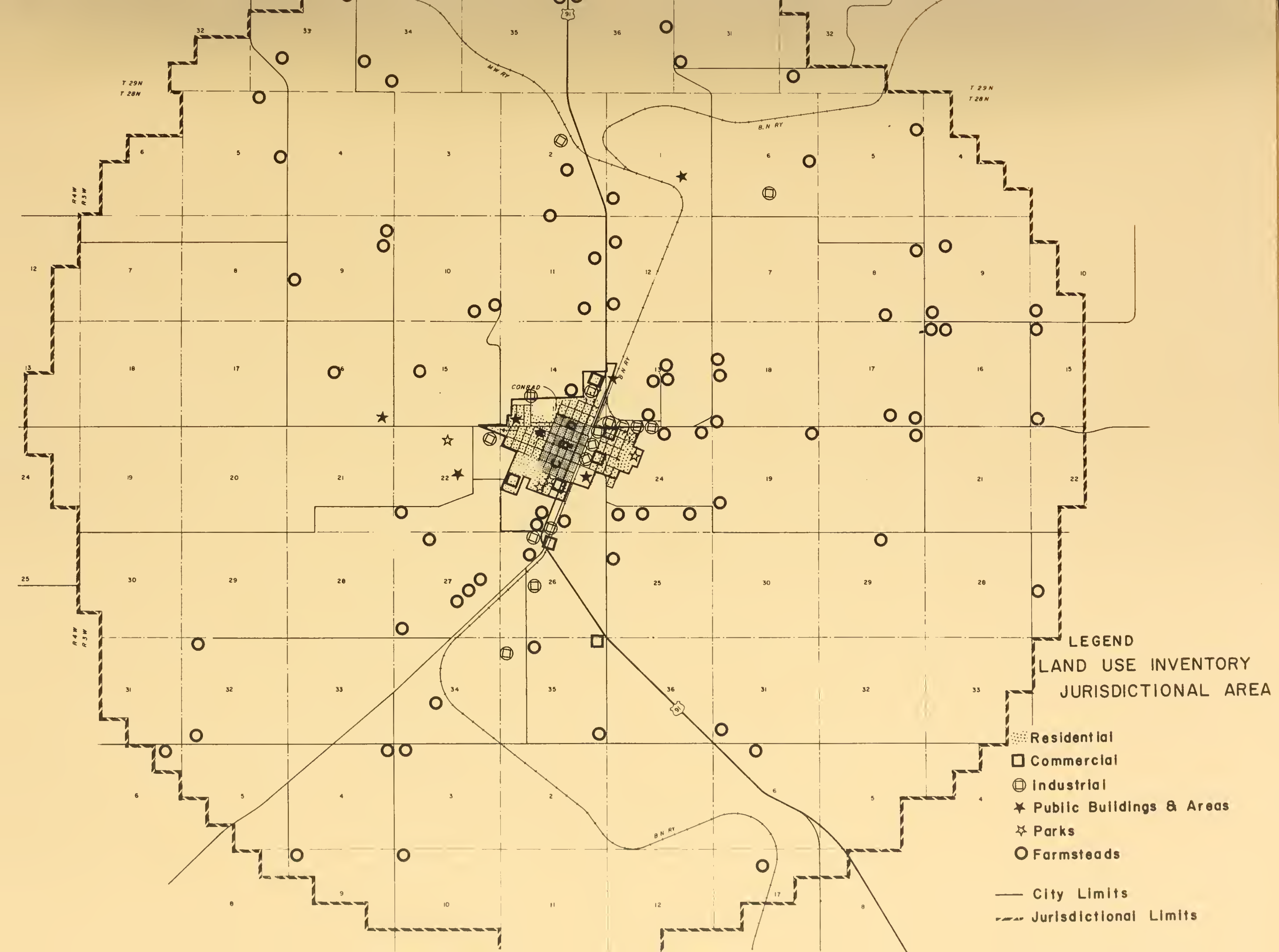
Public and semi-public land uses consume 12% of the developed non-corporate area and consist of those uses requiring larger tracts of land than are available within the city including the cemetery, the airport complex, the sewage disposal system, the landfill dump, and the city shops. These uses are mostly located scattered along the periphery of the city. Park and recreational uses located in the non-corporated area also require large tracts of land and include the golf course and the partially completed athletic complex. The largest amount of developed land outside the city is devoted to roads and highway rights-of-way. Most of these rights-of-way are used for county or farm roads which serve the farmsteads and agricultural areas of both the planning area.

TABLE 41

LAND USE JURISDICTIONAL AREA

Use	Area in Acres	% Developed Area	% Total Area
Residential	487.2	23.9	1.0
Commercial	41.1	2.0	0.1
Industrial*	78.4	3.8	0.2
Public, Semi-Public	247.9	12.1	0.5
Parks Recreation	94.9	4.7	0.2
Streets & Highway Right-of-way	680.5	33.3	1.5
Railroad Right-of-way	412.1	20.2	0.9
Developed Land	2,042.1	100.0	4.4
Vacant and Agricultural Land	44,357.9		95.6
Total Jurisdictional Area	46,400.0		100.0

*Includes railroad right-of-way within City of Conrad.



LEGEND

LAND USE INVENTORY JURISDICTIONAL AREA

TABLE 42

LAND USE NON-CORPORATE AREA

Use	Area in Acres	% Developed Area	% Total Area
Residential	304.0	19.7	0.7
Commercial	6.5	0.4	0.01
Industrial	48.4	3.1	0.1
Public, Semi-Public	185.6	12.0	0.4
Parks, Recreation	85.6	5.5	0.2
Highway Right-of-way	504.2	32.6	1.1
Railroad Right-of-way	412.1	26.7	0.9
Developed Land	1,546.4	100.0	3.4
Vacant and Agricultural Land	44,225.5		96.6
Total Non-Corporate Area	45,771.9		100.0

City Limits Land Use

General

The City of Conrad has developed from a rectangular grid pattern, which constitutes the original city design. This uniform layout of plats and streets has resulted in compact community development. A stable population over the years has, in turn, added to the quality of developments within the city. The division of the city into western and eastern sectors by the Burlington-Northern Railroad tracks has resulted in some disruption of the city's integrated development pattern.

The majority of the city's developed area is located west of the railroad tracks. Development in this sector has been progressive and clustered, providing land and utilities for the Central Business District and most of the community's parks, schools and hospital facilities. A homogenious residential neighborhood has developed west of the Central Business District (C.B.D.) in conjunction with the parks and school systems.

Development east of the tracks has been generally scattered with no design criteria used to position the various uses that have located here. Thus, residential, commercial and industrial uses are intermixed while large parcels of land remain undeveloped and vacant among the various uses.

TABLE 43

LAND USE, CITY OF CONRAD

Use	Area in Acres		% of Developed Area		% Total City Area	
Residential		183.2		36.9		29.1
Single Family	152.3		30.7		24.2	
Multi-Family	2.1		0.4		0.3	
Mobile Home	28.8		5.8		4.6	
Commercial		34.6		7.0		5.5
Industrial*		30.0		6.1		4.8
Public, Semi-Public		62.3		12.5		9.9
Parks, Recreation		9.3		1.9		1.5
Streets and Alleys		176.3		35.6		28.1
Developed Land		495.7		100.0		78.9
Vacant Land		132.4				21.1
Total City Area		628.1				100.0

*Includes railroad right-of-way

Residential

Residential development illustrates the general sequence of growth for the city as a whole. Just west of the C.B.D., along Virginia, Maryland, and Delaware Streets, is a zone of older but well-maintained residences. Most of these dwelling units are single family but some have been converted into multiple family residences. West of Delaware Street, middle aged, single family residences form a continuing and compact residential neighborhood. At Iowa Street newer residences and progressing residential development protrude into undeveloped farm lands. New developments in this vicinity are limited due to glide path restrictions required around the airport.

Because of restrictions on development west of the city a new area northwest of the C.B.D. is beginning to be subdivided. Beginning at the intersection of Wisconsin Street and Sunset Boulevard and extending northwestward new lots and streets are being platted along north-south lines. This layout has resulted in new streets being askewed approximately 30 degrees from the original townsite plat, causing many triangular shaped lots and potentially hazardous intersections. New developments in this area have been designed to follow former property lines which fell along section lines. Developments in this area include a mobile home court, the new Pondera County Hospital, the Pioneer Home, and a proposed new high school. All of these developments are located in the airport glide path but are not affected by height requirements.

Another area of new residential development lies north of the city's center and west of Highway 91. This area has been subdivided and annexed into the city. Proposed developments include a mobile home park and new single family residences. This area is directly across from the proposed Interstate 15 interchange into Conrad. This interchange is expected to increase demands for commercial building sites in this vicinity and on residential lots along Main Street north of the C.B.D.

East of the Burlington-Northern tracks residential development has been scattered and intermixed with other uses. Many residences are in need of repair with many vacant and deteriorating. No neighborhood boundaries or cohesion is apparent and no school or park is available to promote clustered neighborhood development. This area is somewhat isolated as schools and shopping areas are not within easy walking distance and the railroad tracks form a physical barrier limiting access. New developments are being constructed including a 40-unit trailer court, a new park adjacent to the court, and a proposed multiple dwelling unit complex.

Residential land use consumes the largest percentage of developed land in Conrad, amounting to 183.2 acres or 29.1% of all city land.

Commercial

The Conrad C.B.D. covers a 7-block area along both sides of U.S. Highway 91, which becomes Main Street within the city. One block east, paralleling Main Street lies the Burlington-Northern tracks which have limited commercial developments to those areas between Front and Main Streets. (See the Central Business District Land Use Inventory Map.)

The C.B.D. in Conrad is more compact and viable than the C.B.D.'s in surrounding communities and, as discussed in the Labor Force and Employment section of Chapter II, Conrad's C.B.D. attracts substantial retail trade from beyond the city and county boundaries. There are few vacant buildings and several new store fronts are visible along Main Street indicating pride and confidence in the future of the community. The compact form of the C.B.D. presents a consolidated shopping area capable of generating large amounts of pedestrian shoppers and "drop-in" trade while concentrating traffic and economizing land and street use.

Completion of Interstate 15 will reduce the amount of through traffic along Main Street and, as mentioned in Chapter II, will enhance the attractiveness and accessibility of larger urban centers, such as Great Falls. The location of the interstate interchange will further alter traffic patterns as well as increase the demand for commercial developments north of the C.B.D.

Such conditions will decrease the sales potential of the C.B.D. and could possible threaten its viability. The present parking deficiency, discussed in the Transportation Chapter, should be rectified and restrictions to control strip developments should be instituted to help maintain the present productive capacity of the C.B.D.

Nearly all commercial land uses within the city are in the C.B.D. However, several home occupations or small service establishments, such as auto repair garages, are located among residential uses. Most such uses, as well as several vacant commercial buildings, are located east of the Burlington-Northern tracks. The vacant commercial sites indicate that only a limited demand for commercial activities presently exists in this area.

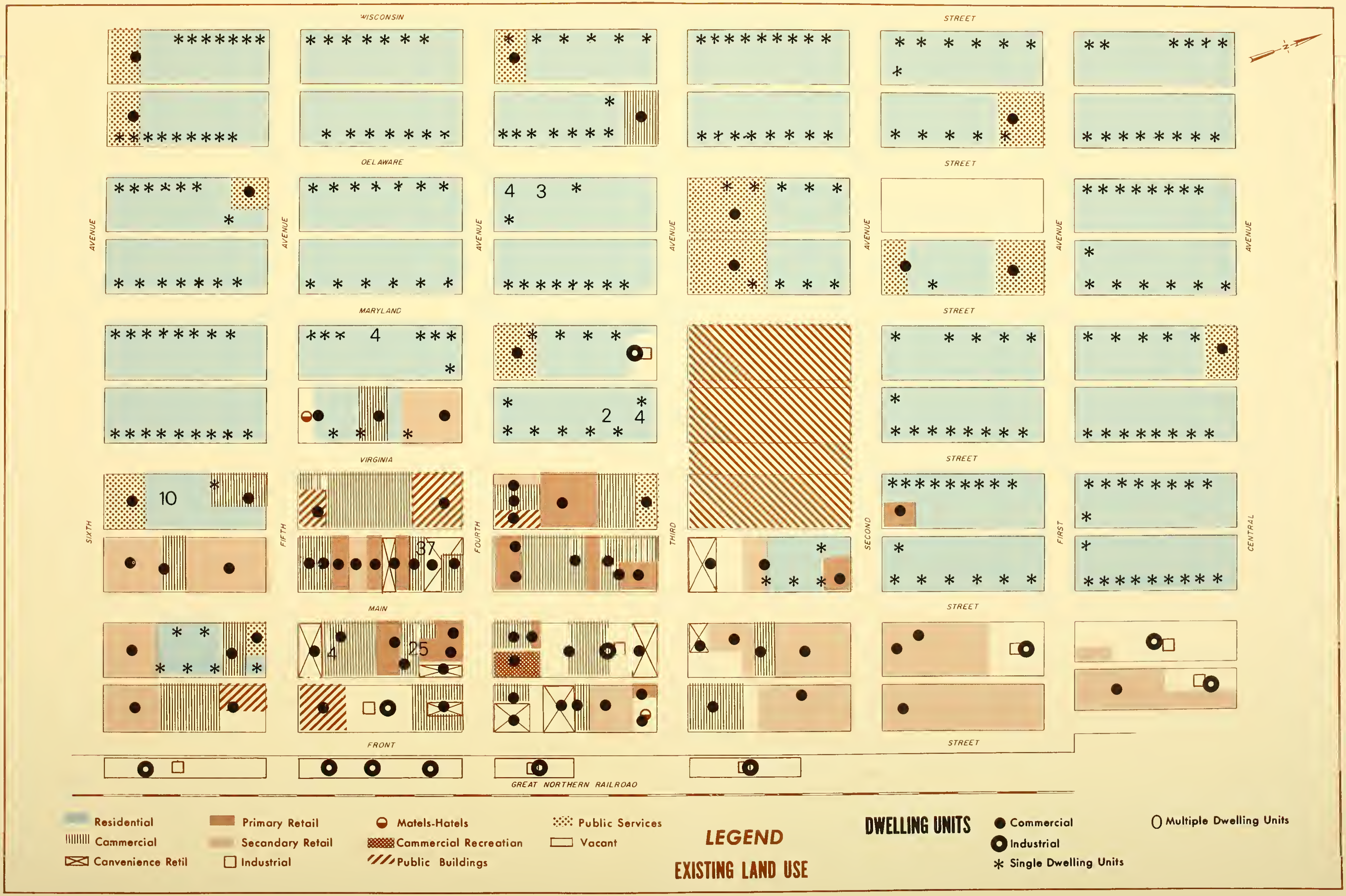
Industrial

Industrial land use in Conrad consumes 30.0 acres of land area. Due to the dependence of much of the industrial uses on the railroad, lands occupied by railroad facilities are included in the statistics for industrial land use in Conrad. Most industrial use in the city is located in a strip, some 300 feet wide, adjacent to the railroad tracks. This industrial zone forms a continuous strip through the city which limits east-west access through this zone to Central Avenue and Fourth Avenue South. This lack of access results in a division of the city and additional fire and police protection problems.

Industrial uses in Conrad are primarily concerned with the warehousing, storage, and processing of agricultural products. The location for these industries is based on the need for rail transportation and truck access. Most industrial uses in Conrad are well located, presenting a relatively good image, and appear economically stable. Two industrial uses, however, are located outside of the above-described area and present some locational problems. In the vicinity of the county hospital and adjacent to the site of the proposed high school is a ready-mix cement plant and an inactive slaughter house, which is just outside the present city boundary. These uses generate traffic which is incompatible with a residential neighborhood and as the city grows and expands around these uses they will become increasingly detrimental to the community.

Public and Semi-Public

The 62.3 acres of public and semi-public land use consists of developed sites occupied by city and county buildings, federal buildings, the Pondera County Hospital, the Poineer Rest Home, churches, schools, and fraternal or similar institutions. Also included in the above acreage is a 21.5 acre site for the proposed new high school. Public and semi-public land use is dealt with in detail in the Community Facilities Chapter.



LEGEND

EXISTING LAND USE

Parks and Recreation

Conrad presently has four established parks, all located on the fringes of the city. Due to the locations, most residential areas are not within easy access of a park. The high school and elementary school, however, offer some open space and recreational facilities for childrens' activities and are within short walking distance of most residential areas. Parks and recreation areas are dealt with in detail in the Community Facilities Chapter.

Streets and Alleys

Paved streets can set the trend for improving community pride and appearance. Areas without hard surfaced streets often experience dust and water drainage problems and suffer from inadequate on-street parking facilities. Streets west of the Burlington-Northern tracks are mostly paved and well-maintained. East of the tracks most streets are graveled without curbs or gutters.

As previously mentioned, the basic street layout for Conrad is a gridiron pattern which arranges the streets and land parcels in a uniform rectangular fashion. Newly designed subdivisions throughout the county are using curvlinear type street layouts with narrower streets, longer blocks, and fewer cross streets. This arrangement increases usable land area and decreases street maintenance and construction costs.

The newly developing areas, especially north of Sunset Boulevard, have been initially developed using a gridiron design. This pattern of lot and street layout has resulted in the formation of some irregular and hazardous intersections. Application of modern street and subdivision design criteria should be considered in future developments to avoid conflict with the existing street and land use pattern.

The 176.3 acres of land devoted to street right-of-way is the second largest use of developed land and occupies 28.1% of the entire city area.

Vacant

Twenty-two percent (22%), 139.6 acres, of the corporate area of Conrad is vacant. The large amount of vacant land results from the recent annexation of undeveloped adjacent areas. The Arrow and Grand Vista Additions have been platted in the fringe areas of the city with subsequent construction planned in the near future. The area east of the tracks also contains large amounts of vacant land.

Conrad Compared to Other Cities

Table 44 compares the developed land uses in Conrad with those of other cities in the Rocky Mountain area of comparable size and with an imaginary typical city of ideal propotions. Although the figures are based on land use within cities and do not consider developments outside corporate limits, they do provide a relative base for evaluation. Also, in comparing the amount of use in Conrad to other cities, it is necessary to consider the contribution of that use to other areas and the maintenance of that use by outside agents. Thus, Conrad has a high level of commercial land use, not because it is over-commercialized, but because it serves as the primary trade area for all of Pondera County and also draws retail trade from adjacent cities and counties. The relationship of the figures presented in Table 44 to the character of the individual city is emphasized.

The percentage of developed residential land in Conrad compares favorably to that found in other cities and a typical city. A comparison of the acres per 1,000 population devoted to residential use indicates that the lot size per dwelling unit is larger than in any other city listed. The decreased residential density is the result of the relatively large lot sizes platted in the original town design. This large lot size, 42 by 140 feet, has limited the congestion of housing units and has deterred the deterioration that has occurred in many cities where lots were originally platted with only 25 feet of frontage.

The amount of land devoted to commercial uses is relatively high, as reflected in both percentage and per capita figures. As stated above, the commercial area of Conrad serves as the major trade center for Pondera County and adjacent areas, and thus the amount of commercial land in Conrad is expected to be greater than that found in an average city. In all the cities listed in Table 44, a compact and clustered commercial area was recommended to encourage sustained and increasing commercial sales. The fact that Conrad has a compact and clustered C.B.D. as well as a high level of retail sales supports such recommendations and continued C.B.D. maintenance.

The percentage and per capita figures in Table 44 indicate an adequate level of industrial development in Conrad. Conrad compares favorably with the other listed cities, especially as the primary factor of Conrad's economy, agriculture, is not directly represented in these figures.

Conrad has a relatively high level of public and semi-public land use. This is due to the location of the county seat at Conrad and the acquisition of a large new site for the proposed high school. The land devoted to such uses is an asset to the community for, as seen in Table 44, many communities are badly lacking in adequate land for providing necessary community facilities.

The amount of land, devoted to park use in Conrad is badly deficient and as shown in Table 44, Conrad is the second lowest of all the cities listed in their per capita park land allocation. A typical city would have 7% of its developed land used for parks; Conrad has only 1.9% of its developed land devoted to park lands. When the Planning Area as a whole is considered the per capita amount of park land is substantially increased. It should be recognized, however, that the recreational opportunities provided by the facilities outside the city are designed for specific recreational uses and are not readily available for general park and recreational activities.

Conrad has a larger amount of land devoted to streets than is considered necessary. Over 35% of Conrad's developed land is in street right-of-way compared to 30% for a typical city and the per capita acreage consumed by street use is the second highest of all cities listed in Table 44. This large street acreage is the result of originally platted short blocks and wider than average residential streets and alleys.

TABLE 44

CITY OF CONRAD, MONTANA
COMPARATIVE LAND USE DATA

Land Use	Conrad, Montana	Libby, Montana	Shelby, Montana	Livingston, Montana	Gillette, Wyoming	Typical City
			PERCENTAGE OF DEVELOPED AREA			
Residential	36.9	35.1	33.5	37.6	33.6	38.0
Commercial	7.0	7.1	6.4	4.3	8.0	3.0
Industrial	6.1*	2.7	2.4	1.9	3.7	4.0
Public, Semi-Public	12.5	16.4	9.0	5.7	17.0	14.0
Parks	1.9	7.8	5.4	6.4	1.0	7.0
Streets	35.6	27.0	41.2	32.4	26.0	30.0
Railroad Land	--	3.9	2.1	11.6	10.7	4.0
		ACRES PER 1,000 PERSONS				
Residential	59.9	49.6	53.2	43.4	35.8	
Commercial	11.3	10.0	10.1	4.9	8.5	
Industrial	9.8[1]	3.8	3.8	2.3	4.0	
Public;Semi-Public	20.4	23.3	14.2	6.6	18.2	
Parks	3.0	11.1	8.7	7.4	1.1	
Streets	57.6	38.4	65.3	37.4	27.6	
Railroad Land	--	6.0	3.3	13.4	11.3	
Population at Time of Survey	3,060[2]	3,286	3,111	7,800	4,940	

[1] Includes Railroad Land.

[2] 1971 population estimate derived in Chapter V.

Sources: Northwest Planners Association, Conrad, Montana Comprehensive Plan, 1971.
Northwest Planners Association, Shelby, Montana Comprehensive Plan, 1971.
Northwest Planners Association, Libby, Montana Inventory and Analysis, 1971.
Bucher and Willis, Gillette, Wyoming Comprehensive Plan, 1967.
Consulting Services Corporation and Theodore J. Wirth and Associates, Livingston, Montana Comprehensive Plan, 1967.

Floor Space Inventory and Assessed Valuation

Floor Space Inventory

Floor space provides a more accurate measure of the distribution and intensity of commercial and industrial activity than does land use acreage data. For this reason an inventory of the gross floor area of all commercial and industrial uses was made. This inventory included manufacturing, wholesaling, retail, service, and other commercial uses. The number of establishments in each type of use and their accompanying sales are given in Chapter II. This section provides data on gross floor space for the various types of establishments. Approximations for future floor space requirements are given in Chapter II. These approximations are for net floor area or sales area while gross floor area includes storage areas and other non-sales floor space.

Commercial covers a broad range of uses, including retail, service, office, recreation, and hotels-motels. Retail uses have been segregated into three categories: Convenience - i.e. grocery, drug, and gas stations, selling goods on a "drop-in" basis; primary - such as department, apparel and jewelry stores, supermarkets, and variety stores where parking is a primary consideration; and secondary - consumer goods requiring special handling or storage facilities and wholesaling firms. The service classification includes repairs, transportation depots, and personal care; the office classification consists of baking, professional services, and administrative offices; and recreation includes theatres, bowling alleys, and billiard halls. Industrial uses include manufacturing, machine shops, warehousing, open storage, and heavy industrial repair or fabricating shops.

The floor space inventory recorded over a half million square feet of floor area in the total Planning Area. Over 88% of all floor space was located within the city, illustrating that development has been concentrated within Conrad. Tables 45 and 46 give the footage and percentage tabulations of floor space in the total Planning Area and the city.

TABLE 45

OCCUPIED COMMERCIAL FLOOR SPACE: JURISDICTIONAL AREA

Use	Square Footage	Percent of Total Occupied Floor Space
Retail		
Primary	77,178	13.4
Secondary	106,508	18.5
Convenience	46,218	8.0
Commercial Services	59,487	10.3
Industrial	212,599	36.9
Motel-Hotel	31,918	5.5
Commercial Recreation	8,841	1.5
Private Office	32,886	5.9
	576,635	100.0

TABLE 46

OCCUPIED COMMERCIAL FLOOR SPACE: CITY OF CONRAD

Use	Square Footage	Percent of City Floor Space	Percent of Total Occupied Floor Space
Retail			
Primary	77,178	15.1	13.4
Secondary	94,604	18.6	16.4
Convenience	46,218	9.1	8.0
Commercial Service	44,711	8.8	7.8
Industrial	177,166	34.8	30.7
Motel-Hotel	31,918	6.3	5.5
Commercial Recreation	3,297	0.6	0.6
Private Office	33,886	6.7	5.9
	508,978	100.0	100.0

Industrial use accounted for the greatest amount of floor space. Considering the high level of retail sales, (See Chapter II) and the large amount of industrial floor space, Conrad appears to have a well-rounded economic base. Secondary retail use accounted for the second largest amount of floor space, but had only slightly more than half the amount for industrial use. All retail uses combined accounted for 39.9% of all floor space, slightly more than that for industrial use.

The high level of secondary retail floor space indicates that a large measure of the retail sales in Conrad is made up of secondary retail goods. The figures in Table 45 support the observation that many persons from adjacent areas come to Conrad to shop for farm equipment, furniture, and similar major shopping items. The importance of the secondary retail sector must therefore be considered a vital part of the business community and should be given major consideration in all business district planning decisions.

Table 47 gives the footage and percentage figures for the Conrad expanded Central Business District. The expanded C.B.D. includes all buildings found on the Conrad C.B.D. Land Use Map as well as the uses along Main Street within the city and the uses found in the industrial strip along the Burlington-Northern tracks. Table 47 shows that nearly 85% of all floor space and 93.1% of all retail floor space is located in this area.

Once again, industrial use accounts for the largest amount of floor space for any single use, accounting for 32.6% of all C.B.D. floor space, while all retail uses combined accounted for 43.9% of the floor space. Industrial uses in the expanded C.B.D. are located entirely within the railroad industrial strip. Primary retail uses are clustered along Main Street between Third and Sixth Avenues South while secondary retail is located along Front Street and along Main Street west of Third Avenue South.

All motel-hotel and convenience retail uses and all, but one, private office uses are located within the Conrad expanded C.B.D. Most commercial service uses are located in the expanded C.B.D. with a small percentage generally scattered throughout the city and jurisdictional area. Commercial recreation uses occupied the smallest percentage of floor space with only three such establishments located within the Planning Area. Considering the expected A.B.M. impact population a large potential for private recreational development is indicated.

TABLE 47

OCCUPIED COMMERCIAL FLOOR SPACE: EXPANDED C.B.D.

Use	Square Footage	Percent of Expanded C.B.D.	Percent of Total Occupied Floor Space
Retail			
Primary	77,178	15.8	13.4
Secondary	90,604	18.6	15.7
Convenience	46,218	9.5	8.0
Commercial Service	47,275	9.7	8.2
Industrial	159,230	32.6	27.6
Motel-Hotel	31,918	6.5	5.5
Commercial Recreation	3,297	0.7	0.6
Private Office	32,396	6.6	5.6
	488,116	100.0	84.6

Four vacant commercial structures were located within the expanded C.B.D. These buildings had a total floor space of 12,092 square feet, or 2.1% of all floor space. All of these buildings were located on the fringes of the main business district. Two additional vacant structures were located in the Planning Area. These were badly deteriorated structures, located east of the Burlington-Northern tracks, and were not measured or included in the floor space inventory.

Substandard commercial floor space in the Planning Area was calculated to give a further indication of the viability of the business community. Only 6.5% of all occupied floor space was industrial with motel-hotel, convenience retail and commercial service uses accounting for 26.9, 14.7, and 12.8%, respectively, of the substandard floor space. Primary retail uses recorded no substandard floor space and secondary retail uses accounted for less than 1% of the substandard floor space. Only one substandard commercial building was located outside the city limits. These figures again illustrate the viable nature of the retail sector.

TABLE 48

SUBSTANDARD OCCUPIED COMMERCIAL FLOOR SPACE: JURISDICTIONAL AREA*

Use	Substandard Footage	Percent of Substandard Footage	Percent of Total Occupied Floor Space
Retail			
Primary	--	--	--
Secondary	240	0.6	0.0
Convenience	5,520	14.7	1.0
Commercial Service	4,796	12.8	0.8
Industrial	16,930[1]	45.0	2.9
Motel-Hotel	10,098	26.9	1.8
Commercial Recreation	--	--	--
Private Office	--	--	--
	37,584	100.0	6.5

*Only one substandard building is located outside the city.

[1] Includes 2,520 square foot building located outside the city.

The floor space inventory also recorded the number of buildings and businesses in the Conrad Jurisdictional Area. A total of 189 buildings housing 206 businesses were inventoried with 167 buildings, or 88%, and 188 businesses, or 91% located within the city limits. A total of 15 occupied buildings were substandard, housing 14 businesses.

Assessed Valuation

Because of its central location, concentration of business activity and large revenue producing capacity, the C.B.D. contains a large share of the city's taxable real property. The C.B.D. assessed valuation map shows the assessed valuation of each block in the Conrad C.B.D. The structure of land values in the C.B.D. has a direct influence on the density and location of commercial uses.

The area with the highest value in the C.B.D. is located at the corner of Main Street and Fourth Avenue South. From this intersection, land values gradually decrease along Main Street in both directions. Land values north of the existing C.B.D. are expected to increase substantially, due to increased commercial land demand as a result of the Interstate 15 interchange location.

Land Use Zoning

The use of zoning to regulate uses in Conrad has been limited. However, the town has however, generally developed in a clustered and well-integrated fashion. In light of the expected A.B.M. population impact, future growth cannot be expected to develop in the same healthy and integrated fashion.

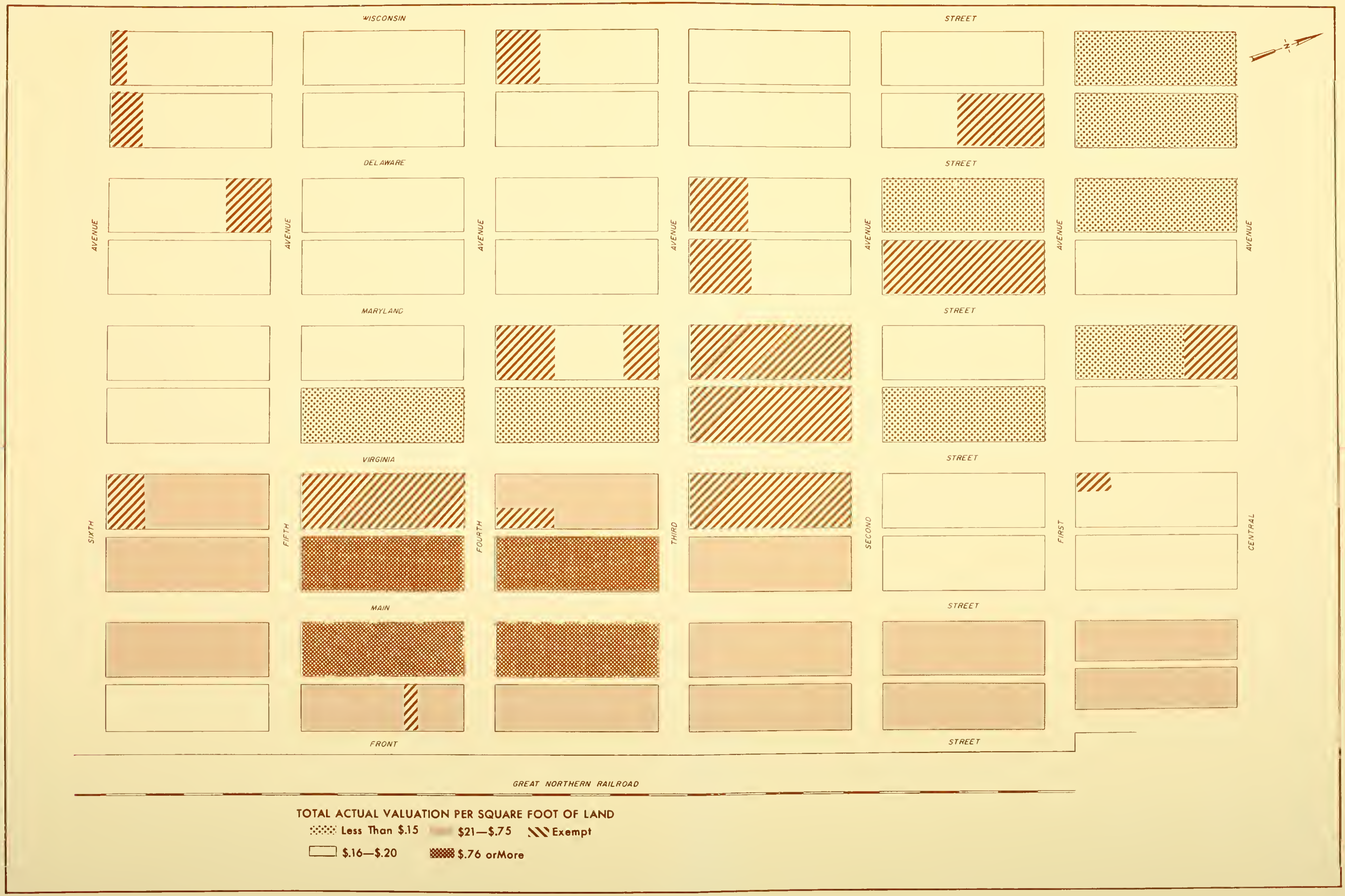
The present zoning ordinance regulates development in less than 40% of the city and for only two types of land use, commercial and residential. Present zoning districts for residential use comprise 163 acres of area while actual residential use occupies 183.2 acres. Similarly, 77.5 acres of land are zoned commercial while only 34.6 acres are actually devoted to commercial use. This "over-zoning" of land for commercial use can lead to scattered and unintegrated commercial and economic growth. The lack of zoning for industrial use, likewise, can result in unplanned and unclustered locations for such uses and lead to encroachment by industry into residential areas.

Consistent zoning and building code enforcement can do much to increase neighborhood pride and confidence. Zoning guarantees certain development rights and responsibilities to specific areas. By abiding by the zoning regulations a property owner is assured that his neighbor will do likewise. The use of zoning can insure continued integrated community development and help reduce and prevent property depreciation and deterioration.

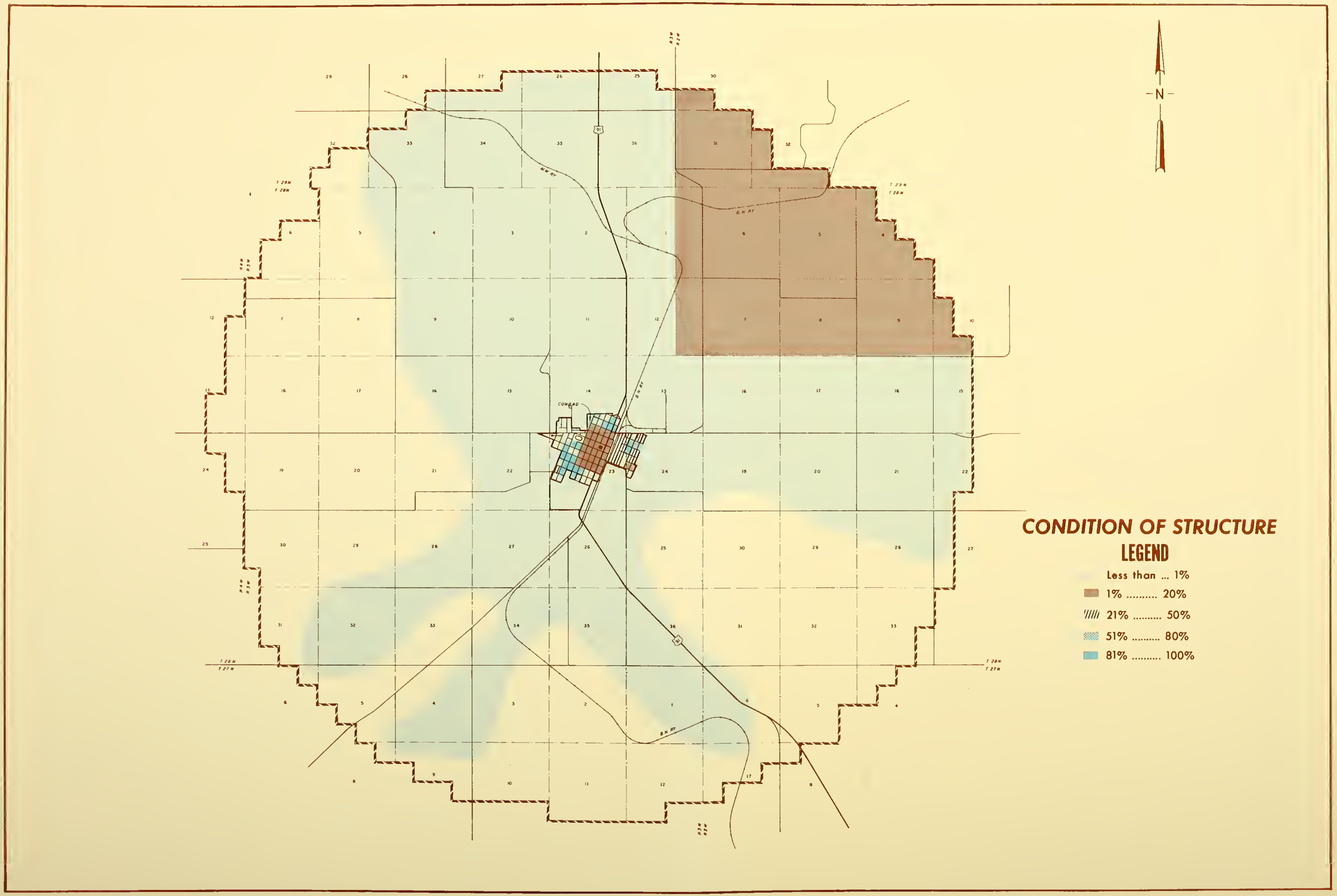
Condition of Structures

A condition of structures survey was conducted in the Planning Area in conjunction with the land use survey. Structures were evaluated and rated on the basis of the exterior condition of their foundations, walls, windows, roofs and chimneys according to criteria established by the Montana Department of Planning. Structures were then determined to be either standard or substandard. The condition of structures survey considers only the exterior condition of buildings, however, it does give a relative indication of the quality of structures within the community. The standard criteria for structural evaluation that was used makes it possible to compare data obtained for Conrad with data from other communities.

To illustrate the condition of the structures in the Conrad Planning Area, two generalized maps were prepared showing the condition of structures in the C.B.D. and in the entire jurisdictional area. In order to outline areas of deterioration, data was plotted by half block segments on the C.B.D. map and by general groupings on the jurisdictional map. In addition to the two maps, Table 49 was prepared which shows the number and percentage of each type of building and its structural condition.



TOTAL ACTUAL VALUATION PER SQUARE FOOT OF LAND



CONDITION OF STRUCTURE

LEGEND

	Less than ... 1%
▨	1% 20%
////	21% 50%
░	51% 80%
▩	81% 100%

TABLE 49

CONDITION OF STRUCTURES

	City Area				Total Planning Area			
Category	Standard	%	Sub-Standard	%	Standard	%	Sub-Standard	%
Residential	1,035	91.5	96	8.5	1,137	91.8	102	8.2
Commercial	94	88.7	12	11.3	109	90.1	12	9.9
Industrial	55	93.2	4	6.8	60	92.3	5	7.7
Public and Semi-Public	32	94.1	2	5.9	34	91.9	3	8.1
Total	1,216	91.4	114	8.6	1,340	91.7	122	8.3

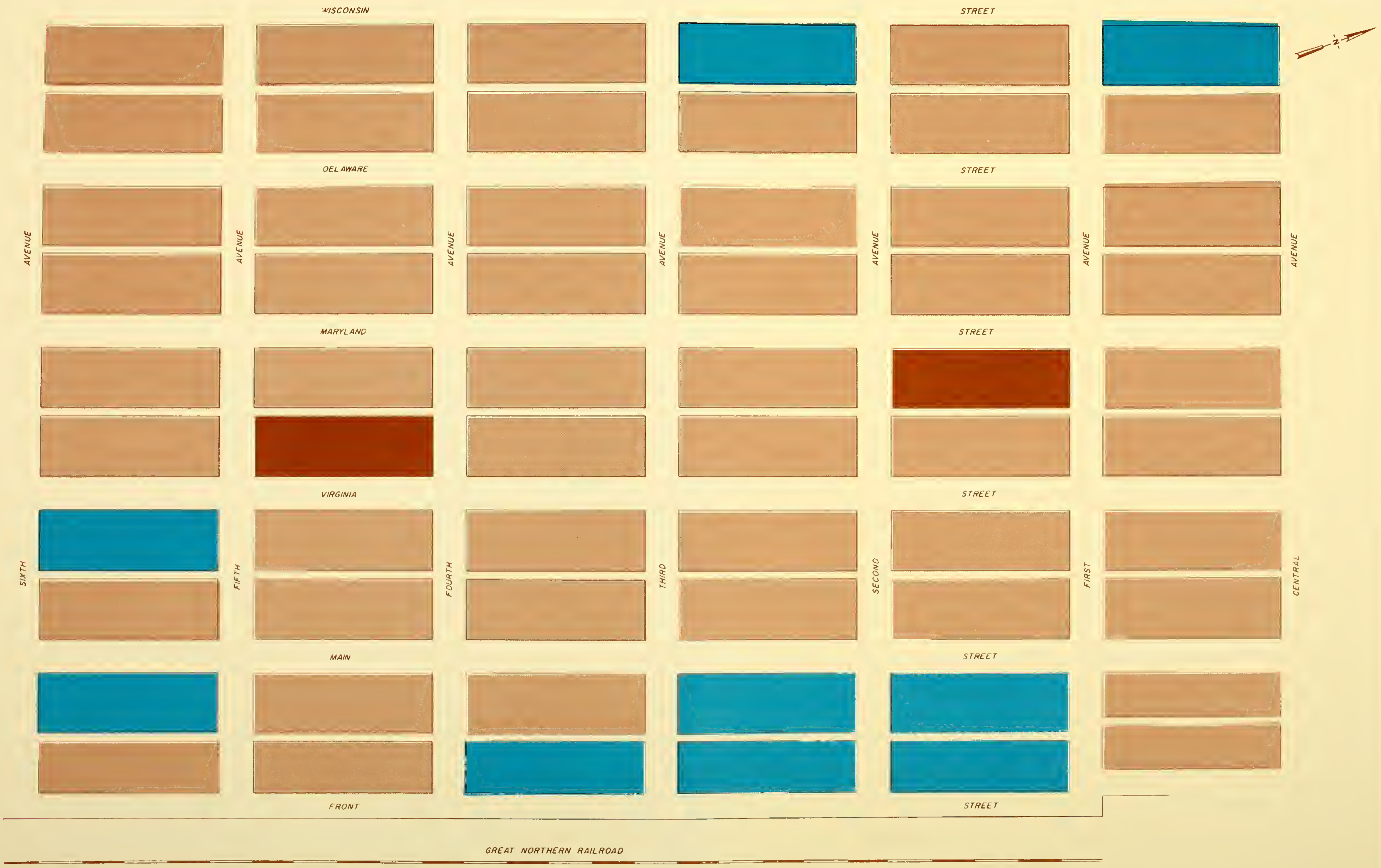
Table 49, shows that less than 10% of all structures are considered substandard in both the city and the total Planning Area. Although data on condition of structures for other cities is limited, the number of substandard structures in the Conrad area is considered quite low.

The highest percentage of deterioration occurs among commercial structures. This higher than average percentage figure is due, in part, to several vacant substandard commercial buildings. A concentration of substandard commercial buildings occurs along Main and Front Streets between First and Fourth Avenues (see C.B.D. Condition of Structures map). Over half the substandard commercial structures are found in these two and one-half blocks. With the completion of the interstate interchange and the accompanying demand for more commercial sites along Main Street, these substandard structures are expected to be replaced or rebuilt as land values appreciate.

East of the Burlington-Northern tracks nearly 28% of all structures are substandard. Almost half of all the substandard buildings in the city are located here. This high rate of structural deterioration is attributable to an intermixing of land use, a lack of a buffer zone between the industrial strip along the railroad and neighboring residences, and an intermixing of residential dwelling types. These conditions create an environment that is not favorable to any of the uses carried on within the area and when property owners cannot be sure that adjacent property will be used in a compatable manner, pride of ownership is decreased. Without the confidence that an investment in home or business improvement will be realized in resale or trade, necessary upkeep is not conducted.

As mentioned earlier (see City Limits Land Use) development east of the tracks has been scattered and unclustered. Because developments are relatively widespread in this area, utility construction costs to service each unit are above average. As most of the city's amenities are located west of the tracks, the property values are lower here than elsewhere in the city. The revenue-generating capacity of this area has not been adequate to provide necessary community facilities and thus has become less desirable for residential living. As the city continues to grow and develop west of the tracks, the deterioration of this area is expected to increase due to lack of community facilities and revenue-generating capacity.

Structural deterioration throughout the rest of the city is generally limited and intermittent. Other than as mentioned, no pockets of blight were observed. Similarly, the Planning Area outside the city has a very low level of deterioration.



LEGEND

CONDITION OF STRUCTURES

🟫 Less than 1%

🟦 21% 50%

🟥 1% 20%

CHAPTER V

HOUSING

HOUSING

Inventory

Housing in the Conrad Planning Area was briefly discussed under the residential section in the Land Use Chapter. First count data from the 1970 Census provides additional information on the existing housing situation.

In 1960 there were 2,415 housing units in Pondera County with 26% consisting of farmsteads and 37% urban and 37% rural non-farm. In 1970, housing units had decreased by 49 units to 2,366.[1] Although information from the 1970 Census, which breaks down housing units into farm and non-farm categories is not yet available, data does show that there are 1,290 rural, farm and non-farm homes making up 54.5% of the housing units. This is a decline in both the absolute and percentage figures for rural housing. Correspondingly, the percentage of urban housing units increased to 45.5% of the housing units in the county with 1076 urban dwelling units. Data from the Land Use Inventory recorded 1131 housing units within the city which would increase the percentage of urban housing units in the county to nearly 48%. This substantial increase in housing units in Conrad is largely the result of recent annexation of new areas by the city and the influx of people in anticipation of A.B.M. construction. The decrease in total housing units, the decrease in rural housing units, and the increase in urban housing units is consistent with the population data which showed county and rural population decreases but population growth in the urban area of Conrad.

1970 Census data shows that there were 1,998 occupied dwelling units in Pondera County. Owner-occupied units amounted to 1,422 or 71.2% of occupied units while 576 units or 28.8% were renter-occupied. In 1960 69.0% of the occupied housing units were owner-occupied while 31.0% were renter-occupied. Thus a slight increase in home ownership percentage has occurred in the county since 1960. Within the City of Conrad, the 1970 Census reported 915 occupied units of which 636 or 69.5% were owner-occupied and 279 or 30.5% were renter-occupied. As expected, the percentage of urban units which are renter-occupied is greater than in the rural areas. The percentage figures for both Conrad and Pondera County show a higher percentage of owner-occupied dwelling units than generally found within the state.

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[1] Ninety-nine additional mobile homes have located within the Planning Area between the time that the U.S. Census was taken in April 1970, and the land use inventory was conducted during Fall 1970. These 99 units have been incorporated into the Census data.

Average value for owner-occupied housing units in Pondera County is listed at $13,070.00 by the U. S. Census, 1970. For the City of Conrad the average value is substantially greater at $15,190.00 per owner-occupied unit. This difference in valuation is largely due to the difference between urban and rural location and amenities. Value of owner-occupied homes in the county as a whole is significantly below the statewide average of $15,475.00. It should be recognized, however, that the value of most owner-occupied homes in rural counties is below the state average. Pondera County compares favorably with other counties of similar size and character in the state. For the City of Conrad, the value of owner-occupied homes is slightly below the statewide average, but average or above compared to other small cities in Montana. The average value of dwelling units for sale in the county is listed at $8,260.00, while in the city the value of such units is $11,560.00.

Census data for 1970 shows the average rent paid for renter-occupied dwellings in the city and county is $72.00 and $67.00 per month, respectively. The $72.00 per month average rent figure for Conrad is about average compared to similar cities, but this figure can be expected to increase with rising housing demand as A.B.M. construction begins. The county figure is similarly about average. Average rent value for vacant units is calculated at $56.00 per month for the county and $125.00 per month for Conrad. This high rent value for vacant rental units in Conrad cannot be assumed representative as rental value for only three units were tabulated by the Census. Average monthly rental rates are suggested to be approximately 25% of a person's net monthly income by the Federal Housing Administration. This 25% figure, however, has been criticized as being too high. Rent rates should be considered in light of income characteristics and as income characteristics in Pondera County do not substantially differ from those for the state as a whole (see Chapter II) the present rent structure in Pondera County is deemed to be at a relatively optimum level.

Census data for 1970 records 269 vacant dwelling units in the county. Of these, 25 units are for sale, 45 units for rent, 53 are vacant for seasonal periods only, and 146 are vacant for undisclosed reasons. Within Conrad, there were 62 units vacant; 14 for sale, 14 for rent, 8 seasonally vacant, and 26 vacant for undisclosed reasons. The percentage of vacant units in the county was 12% of all dwelling units, while in Conrad it was only 6%. The county figure is the same as the state vacancy percentage while that for Conrad is just half of the state and county averages.

Of the total housing stock in Pondera County, 1,902, or 80.4%, consisted of single family residences; 206, or 8.7%, were multiple family units; 205, or 8.7%, were mobile homes; and 53, or 2.2%, were unclassified. In the jurisdictional planning area, 1,239 housing units were counted with 898 units, or 72.5%, single family; 136, or 11.0%, multi-family; and 205, or 16.5%, mobile homes. In the City of Conrad, the only urban classified area in the county, there were 977 units according to the Census, with 767, or 78.5%, single family residences; 136, or 13.9%, multiple dwelling units; 66, or 6.8%, mobile homes; and 8 units, or 0.8%, unclassified. Data from the Land Use Inventory including recently annexed areas in Conrad shows 796, or 70.4%, single family residences; 136, or 12.0%, multiple dwelling units; and 152, or 17.6%, mobile homes. The percentage distribution of types of dwelling units in Pondera County and Conrad is similar to the distribution found in other small cities in Montana. The percentage of single family units is slightly above the state average in both the city and the county while the percentage of multiple family units is below the state average in both the city and county.

TABLE 50

HOUSING TYPE DISTRIBUTION

	City Limits		Planning Area	
Type of Units	Number	% of City Units	Number	% of City Units
Single family	796	70.4	898	72.5
Multiple family	136	12.0	136	11.0
Mobile homes	199	17.6	205	16.5
Total	1,131	100.0	1,239	100.0

Data shows 2,366 total housing units in the county, with 1,239 or 52.4%, located within the Jurisdictional Planning Area, and 1,131 units, or 47.8%, within the Conrad city limits. Dwelling units within the city limits represent 91.3% of all units in the jurisdictional area. The concentration of development within the City of Conrad is again illustrated.

Data gathered in preparation of this report shows that there are 102 dwelling units in the Planning Area and 95 units in the city in need or repair. This amounts to 8.2% of the residential dwellings in the Planning Area and 8.5% in the city. Table 51 shows the number and percentage of each type of dwelling and their structural condition.

TABLE 51

CONDITION OF HOUSING STRUCTURES

	City Limits				Planning Area			
Type of Units	Standard	% City Units	Sub-standard*	% City Units	Standard	% Total Units	Sub-Standard	% Total Units
Single family	705	88.6	91	11.4	801	89.2	97	10.8
Multiple family	134	98.5	2	1.5	134	98.5	2	1.5
Mobile homes	196	98.5	3	1.5	202	98.5	3	1.5
Total	1,035	91.5	96	8.5	1,137	91.8	102	8.2

*Includes dilapidated

Outside the city there are only six substandard units with one dilapidated, or not fit for occupancy. Within the city there are six dilapidated structures two of which are presently occupied. Within the city all but one of these dilapidated structures are east of the Burlington-Northern tracks and 50 of the 90 substandard units in the city are located east of the tracks. of the dwelling units east of the tracks 25% are in need of repair.

The percentage of substandard units in both the city and the Planning Area is considered quite low, although data from other cities is not generally directly comparable and data from the 1970 Census is not yet available. Condition of housing units is one situation where comparisons are hazardous. No city should permit deteriorated housing conditions to go unrecognized even if the number of units is below the norm for most other areas. The "hard-core" pocket of blight that exists within the city east of the tracks should be corrected or continued deterioration in this area can be expected.

Housing Forecasts

With the high cost of individually constructed single family residences, an increase in multi-family or mobile home type dwelling units is expected. In 1969, two-thirds of the homes purchased for under $25,000.00 were mobile homes. A radical change is expected in both the appearance and image of mobile and modular homes in the next decade with modular type housing and modular complexes for multiple family residences becoming commonplace within the next twenty years.

Analysis of income data shows over 65% of the families in Pondera County make under $7,000.00 per year. Assuming that 25% of their net income will be spent for housing, all of these families will be living in houses valued at less than $25,000.00 If the trend in income level continues, and if the trend in modular home construction continues during the planning period, it can be expected that at least 50% of the new housing will be of modular design. Taking into account the popularity of mobile homes among construction workers and other mobile populations, it is foreseeable that 75% of the new units constructed in the county in the next 20 to 30 years will be modular type homes.

In order to predict future housing demand, three items are necessary: (1) density per household, (2) a base population, and (3) projected population changes. A housing projection will be made only for the City of Conrad. It is expected that all significant housing developments will be located within the City of Conrad or adjacent areas which will be subsequently annexed by the city. As can be seen in the population estimates for Pondera County and Conrad, the city is expected to house an increasing percentage of county population. In fact, after 1980 the City of Conrad is expected to grow more than the county as a whole, indicating migration from the rural county into the city. The non-corporate area of the Planning Area is expected to remain essentially agricultural with housing units consisting mostly of farmsteads.

Present population-household density is 3.03 persons per household. As pointed out in the population section, this density is less than the 1960 figure and is mainly due to decreased birth rates.

It is anticipated that birth rates will continue to fall as awareness of population control and population planning increases. In light of this dynamic situation, it is realized that the present density figures will not remain constant. But, because of a lack of alternative figures and clairvoyance, the 1970 housing density will be used as a basis for forecasting housing demand.

A base population figure of 2,770 people is given by the 1970 Census for the City of Conrad. An estimated population for Conrad at the time of this study of 3,060 people was derived using average population per household density and the estimated number of households. The number of households was estimated by using the vacancy rate at the time of the Census and applying it to the total number of dwelling units in the city at the time of the land use survey. The estimated population of Conrad is nearly 300 people above Census count. Part of this increase is due to an expansion of the city limits and the continued migration of county residents into the city, but a substantial number of persons have moved to Conrad in anticipation of A.B.M. construction.

Table 52 gives the projected future population and the forecasted future housing needs. Due to the complexity of the housing market, only the number of dwelling units that are expected to be needed is given. The type of housing unit that will be built to supply the demand will be based on social desires, technological capability, and economic conditions and is thus not predicted.

At the present time, it is estimated that there exist 42 vacant dwelling units capable of supporting a population increase of 127 persons. This means that between now and 1975 housing for an additional 783 persons will be needed. This population will require 258 new housing units. In addition, it is anticipated that the 96 substandard housing units presently standing in Conrad will be rebuilt or undergo major reconstruction. Thus, by 1975 a total of 354 housing units will be needed.

TABLE 52

HOUSING FORECASTS: CITY OF CONRAD

Year	Population	Population Increase	Required New Dwelling Units	Accumulated Housing Total
1970	2,770	---	---	977
1971	3,060	290	---	1,084
1975	3,970	910	354	1,438
1980	5,170	1,200	395	1,833
1985	5,750	580	190	2,023
1990	6,330	580	190	2,213
1995	6,820	490	160	2,373
2000	7,310	490	160	2,533
Totals	7,310	4,540	1,449	2,533

Between 1975 and 1980, an additional 1,200 people are expected to be living in Conrad, with an accompanying need for 395 new dwelling units. In the next ten years population will increase by nearly 40% and housing needs are expected to increase by nearly 70%.

Between now and the year 2000, it is projected that Conrad will grow 160% in population. An additional 1,449 housing units will be required, an increase of 130% over the present housing supply.

CHAPTER VI

UTILITIES

UTILITIES

Introduction

The utilities plan establishes guidelines for a long-range implementation program to correct existing deficiencies and meet the demands of projected land use and population. The plan is based on predicted developable areas to be serviced and levels of service which must be provided each service area.

This utilities plan does not incorporate the features of a preliminary engineering study nor does it include sizing of lines or economic studies. Basic recommendations are given for capacity requirements of primary elements of the utility systems and basic engineering and environmental standards are set forth as objectives to follow. The plan is for a thirty year period based on projected population to the year 2000.

The City of Conrad provides its citizens basically good utility services. The city has strived to extend and improve the water and sewer systems and improve the methods of handling and disposing of solid wastes.

Objective

Water

1. To provide water in proper quantity and quality to meet domestic and industrial needs for present and future peak demands.

2. To provide water for fire protection in adequate supply and at adequate pressure for fire-fighting emergencies.

Waste Water

To collect and properly treat all sanitary and industrial wastes to meet acceptable environmental and health standards and prevent pollution.

Storm Drainage

To provide collection and disposal facilities to prevent damage by storm water to personal and public properties.

Solid Wastes

To collect and dispose of solid wastes and prevent pollution of land, water and air.

Standards

In implementing a sound utilities plan certain design standards should be adopted to insure good operation and minimize environmental hazards. The Montana State Department of Health has adopted Recommended Standards for Water Works and Recommended Standards for Sewage Works prepared by a committee of the Great Lakes-Upper Mississippi River Board of State Sanitary Engineers, commonly referred to as the "Ten State Standards". Proposals contained in this comprehensive utilities plan are based on recommendations of these standards.

In keeping with acceptable standards for fire protection, certain goals have been set forth in regard to the water system. These goals are intended to improve Conrad's fire rating and are consistent with the Standard Schedule for Grading Cities and Towns of the United States with Reference to Their Fire Defenses and Physical Conditions, prepared by the National Board of Fire Underwriters and adopted by the Montana Fire Rating Bureau.

Water Service and Consumption

The Conrad Water Department owns and operates the municipal water system serving the City of Conrad. In 1970, the system served 998 customers of which 197 had metered services and 801 were unmetered. The following is a breakdown of the services by domestic use:[1]

Domestic Use	Metered	Unmetered	Total
Residences	69	801	870
Stores	122		122
Schools	5		5
Hospitals	1		1
Totals	197	801	998

The unmetered customers pay a flat monthly rate varying from $3.45 for one to three room residences to $5.85 for a six room residence plus $6.00 per season per lot for lawn irrigation.[2]

Water consumption varies from a maximum in summertime of 1.8 M.G.D. (Million Gallons per Day) to a minimum of 0.3 M.G.D. in wintertime.[1] Lawn irrigation is restricted in summer months by allowing each customer to irrigate only on alternate days.

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[1] City of Conrad Water Dept. Audit Report (1969-1970).

[2] City of Conrad Engineer's Office.

Usual service pressures are 80 to 95 psi with a minimum of 40 psi anywhere in the service area during periods of heavy draught.

Water Supply System

The water supply source for Conrad is Lake Francis which lies about 14 miles to the northwest of the city. Storage in Lake Francis is 110,900 acre feet[3] and is utilized for irrigation purposes as well as for municipal supply for the City of Conrad. Rights to use the water in Lake Francis are controlled by ownership of water shares each entitling the owner to 1.5 acre feet of water per year. The city recently obtained 200 additional water shares giving them a total of 1,074 shares[4] representing an annual supply of 1,611 acre feet or 525 million gallons of water.

The supply system to Conrad consists of two transmission pipelines which carry water from Lake Francis to the city reservoir. One of these is an old cast iron line containing 32,000 feet of 10" line and 25,800 feet of 8" line. This facility is now badly deteriorated by electrolysis and has for several years been operated as a gravity line to lessen the pressure and decrease the chance of breakage. The other transmission main is a 12" acbestos cement pipeline installed in 1963-64 and operates with the assistance of pumps at Lake Francis. The capacity of the older main operated by gravity is 250 gpm (gallons per minute) and that of the newer 12" line is 1,250 gpm for a combined supply capacity to the city reservoir of 1,500 gpm or 2.2 M.G.D.

Serving as reserve storage for fire protection and to supplement peak hour demand conditions is a 2.0 M.G. ground level reservoir situated on high ground about three miles to the northwest of Conrad. It is an open reservoir but is fenced. Water from the reservoir is supplied to the distribution system by gravity through two 12" mains.

Water Treatment

During wintertime periods when no irrigation water is used, all of Conrad's municipal water passes through a pressure filter of 500 gpm capacity which is located on the 12" feeder mains about one mile northwest of the city limits. During summer months when the municipal demand exceeds 500 gpm, the filter must be bypassed. During all seasons, the water supply is disinfected by continuous chlorination at the location of the pressure filter.

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[3] Engineers Report on Water Supply and Distribution System for Townsite of Conrad, Stanley J. Thill & Assoc., Inc., July 10, 1963.

[4] City of Conrad Superintendent, Herb Schmidt.

Distribution System and Service Area

The water distribution system and service areas are shown on the Water Inventory and Plan map. The major element of the distribution system is a looped main, most of which is 10" size extending along Sunset Boulevard, First Avenue South, Front Street, and Fourth Avenue South. The system is fed by the two 12" pipelines which terminate near the city limits at the intersection of Sunset Boulevard and Fourth Avenue South. The 10" line on Sunset Boulevard, First Avenue South and Front Street was installed in 1963-64, while the lines on Fourth Avenue South are much older. The primary loop includes some 8" main for five blocks on Fourth Avenue South from Front Street to Wisconsin.

An estimated 60 percent of the length of water mains in Conrad are of cast iron and were installed in 1923.[5] Alkaline soil prevailing in the area has created a condition of electrolysis which has been the primary factor causing deterioration of much of the old cast iron pipe. Acbestos cement pipe has been used exclusively for pipe replacement to eliminate the electrolytic action and to increase the expected life of improvements.

The bulk of the distribution system consists of 6" water main with relatively little length of 4" main. Some 4" and smaller main and dead ending which existed in the Jones Addition on the east side has been eliminated with recent development of mobile home spaces for the Army Corps of Engineers.

Fire Protection

Based on fire flow tests conducted in 1964 at seven hydrant locations, Fire Department, alarm system, and other factors, the City of Conrad is given a Class 6 fire rating by the Montana Fire Rating Bureau.

There are 69 fire hydrants located within the city with a hydrant at every street intersection or serving 190,000 square feet within the central business and high valued residential districts.

Fire fighting apparatus includes a 500 gpm pumper and a 750 gpm pumper.

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[5] Per Mr. Stanley Thill, City Engineer.

Sewer System

The Conrad sewer system is shown in the Sewer Inventory and Plan map. All areas of town serviced by the water system are also serviced by the sanitary sewer system. The system contains approximately 57,100 lineal feet of sewer lines of which 14,400 lineal feet are gravity lines of 6" diameter and 41,350 lineal feet are gravity lines of 8" diameter or larger. A point of note is that 6" sewer pipes are no longer considered as generally acceptable by current design standards.[6] There are four sewage lift stations and 1,350 lineal feet of force main used for areas not serviced by gravity lines.

Of 140 manholes in the system, 10 are "flush" type using municipal water to help carry solids through the connecting sewer pipes. Flush manholes have been severely criticized by the Montana State Board of Health as they are considered cross connections with the municipal water supply and should be eliminated wherever possible.

Sewage from Conrad is disposed of by an 18" to 21" gravity outfall sewer which conveys the raw sewage to waste stabilization ponds located about two miles to the northeast of the city limits. The stabilization ponds consist of two cells of 9.4 acres and 8.8 acres or 18.2 acres in total. Such ponds are generally considered acceptable as complete secondary treatment by the Montana State Department of Health if they contain one acre of pond area for every 100 people contributing sewage. (Consistent with Article 92.1, Recommended Standards for Sewage Works, 1968 Edition).

Using a 1970 population for Conrad of 2,770[7] and the present pond area of 18.2 acres, this gives a contribution of 152 people per acre of water surface.

A second criteria in design of waste stabilization ponds (lagoons) is the B.O.D. loading on the pond. Article 92.1 of Recommended Standards for Sewage Works states "in terms of B.O.D., biochemical oxygen demand, a loading of 0.5 pounds per day per 1000 square feet should not be exceeded". Using a B.O.D. of 215 parts per million,[8] a population of 2,770, and a standard sewage contribution of 100 gpcd (gallons per capita per day) gives a B.O.D. loading of 0.63 pounds per day per 1000 square feet which exceeds the recommended value.

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[6] Recommended Standards for Sewage Works, 1968 Edition, Art. 25.1 "Minimum Size - No sewer shall be less than 8 inches in diameter (at min. grade of 0.4%)".

[7] U.S. Bureau of Census, City of Conrad, 1970.

[8] B.O.D. Test - July 8, 1968 by Mr. Don Willems, Mont. Dept. of Health.

B.O.D. tests conducted by the Montana State Department of Health on the treated effluent give B.O.D.'s as follow:

Date of Test	B.O.D. (ppm)
Feb. 26, 1968	60
July 8, 1968	58
April 29, 1970	42

Assuming 215 ppm to be representative of the raw sewage B.O.D., the tabulated values above correspond to percentage removal of B.O.D. from 72 percent to 80 percent, which are below expected normals for waste stabilization ponds.

Storm Sewer Systems

The existing storm sewer system for Conrad is all of relatively recent construction. There are two primary drainage facilities, both located on Main Street. The drainage is separated between 1st and 2nd Avenues South with one sewer taking storm runoff to the south and discharging into Pondera Creek and the other sewer carrying drainage water to the north emptying into a ditch and eventually into Dry Forks. These facilities were constructed in 1962.

The natural drainage in Conrad separates along a diagonal line running generally from Main Street and 2nd Avenue South through Illinois Street and 5th Avenue South. The storm sewer draining to the south serves Main Street and the area between Main Street and Front Street lying south of 2nd Avenue South.

The greater part of Conrad is served by a storm sewer system constructed in 1965, which connects into the north outfall pipe at the intersection of Main Street and 2nd Avenue North. Storm water and snowmelt is carried by curb and gutter to catch basins located on 4th Avenue South, Michigan Street, Sunset Boulevard, Wisconsin Street and Central Avenue. Storm water collected at intersections is piped to the north along Wisconsin Street, east along 1st Avenue North, north again on Maryland Street, and finally east on 2nd Avenue North to the 36" outfall sewer on Main Street.

A complete analysis of the storm sewer system was conducted in 1960 in a street study[9] for Conrad. This study reported adequate removal of storm drainage by the existing facilities with the exception of the intersection of Wisconsin Street and 3rd Avenue South. That intersection has since been improved by an extension of the storm drain system on Wisconsin Street from 2nd Avenue South to 3rd Avenue South.

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[9] _Preliminary Engineer's Report for Northwest Street Improvement District_, Stanley J. Thill & Assoc., Inc.

The storm sewer system is quite new and in excellent condition. The system is of sufficient size to handle some extensions for future expansion.

PLAN AND RECOMMENDATIONS

Water Supply

Based on projected population increases and present per capita consumption rates it is apparent that the present rate of supply from Lake Francis to the City Reservoir will be inadequate to meet peak daily demands within the next three to four years. The population forecast indicates that an additional 900 gpm (gallons per minute) will be required by 1985 and 1500 gpm by the year 2000 representing a supply rate of twice the present rate. Inasmuch as the existing 8" and 10" gravity line is badly deteriorated, it is recommended that a new supply line be planned for a capacity of 1750 gpm (2.50 M.E.D.) to replace the old gravity line. This, with pumping improvements at Lake Francis, and the existing 12" supply line would give a supply rate of 3000 gpm (4.32 M.G.D.) satisfying projected needs to the year 2000.

Since Conrad's annual supply depends on its ownership of water shares in Lake Francis, annual supply requirements were investigated for the study period. This investigation shows adequate annual supply with presently owned water shares for a population of between 5,800 and 6,500; adequate for projected populations between 1985 and 1990. By the year 2000, the City of Conrad should anticipate acquiring an additional 300 or more shares, which represents an additional annual supply of about 150 million gallons.

Storage and Peak Supply

Storage was investigated through the study period considering requirements for balancing demands and for fire protection. Based on providing a fire flow or 2,500 gpm for ten hours duration* and assuming the supply rate from Lake Francis is increased as recommended, the present reservoir capacity would appear to be adequate. However, since the reservoir is located three miles from the city, its function is somewhat ineffective. It is therefore recommended that additional storage be considered in the form of an elevated tank located within the city limits of Conrad. Elevated storage such as this would be very effective in supplementing supply and maintaining pressure for momentary high demands such as for fire flows or peak hours of domestic consumption. The best location for an elevated tank in Conrad would be on the east side of the city near the railroad tracks (see Water Inventory and Plan map).

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*Recommended per Standard Schedule for Grading Citing and Towns.

As an alternative to elevated storage within the city, or complimentary to it, a booster pumping installation located between Conrad and the city reservoir should be considered. A small elevated tank combined with booster pumping would probably function more effectively while booster pumping alone would be less costly but less effective.

Treatment

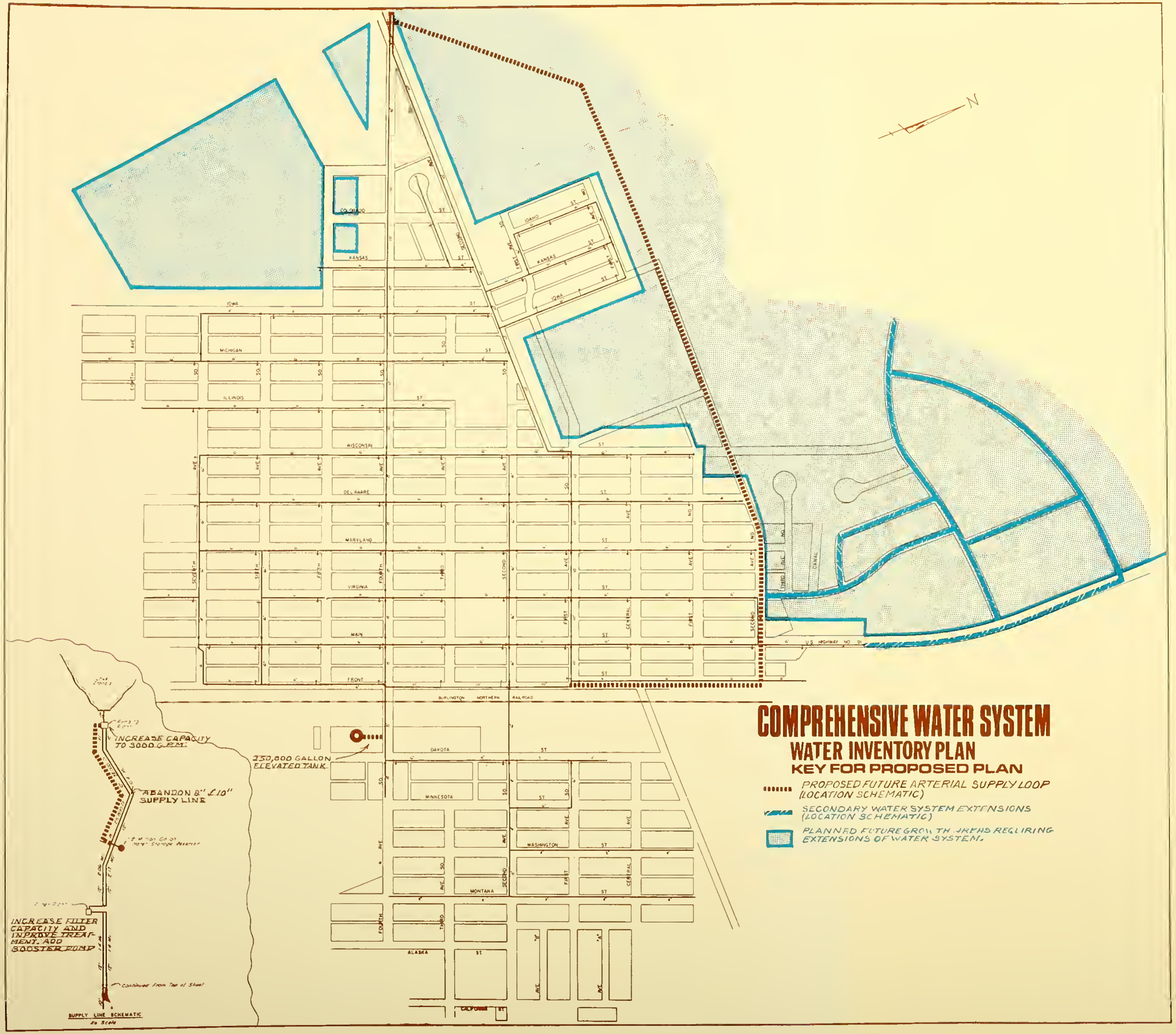
In future years, it seems probable that Lake Francis will become subjected to greater recreational use. Therefore, it is prudent to anticipate an improved treatment facility. The water system plan includes improvements to the filtration facility.

Distribution System and Extensions

The Water Inventory and Plan map shows planned areas of projected future growth which will require extensions of the present water system. In servicing the area to the northwest of Conrad, will require an additional arterial supply main. Such an improvement should be looped and connected into the present 10" loop as well as the supply mains feeding into the city. Due to the complex nature of water distribution systems, it is recommended that new computerized techniques be used to analyze the system and choose the proper size and location for an additional arterial feeder loop. Such an analysis would also determine the effectiveness of elevated storage and/or booster pumping. An additional main supply loop and other secondary extensions are shown schematically on the plan.

In implementing water system extensions, it is recommended that the following criteria be adopted to conform to the standards set forth in this report:

1. Minimum size main shall be 6" to meet requirements for providing fire protection.
2. Only standard hydrants as defined by Montana Fire Rating Bureau shall be installed.
3. Looping of water mains shall be provided wherever possible.



COMPREHENSIVE WATER SYSTEM

WATER INVENTORY PLAN

KEY FOR PROPOSED PLAN

▪▪▪▪▪▪ PROPOSED FUTURE ARTERIAL SUPPLY LOOP (LOCATION SCHEMATIC)

▨ SECONDARY WATER SYSTEM EXTENSIONS (LOCATION SCHEMATIC)

▨ PLANNED FUTURE GROWTH AREAS REQUIRING EXTENSIONS OF WATER SYSTEM.

4. Ferrous materials shall not be used for water main due to the extreme alkalinity and corrosive nature of the soil.

5. Privately developed utility systems in subdivisions should conform to city standards and should be inspected for conformity before being accepted for annexation.

Sanitary Sewer System

A first goal in planning future sanitary needs for Conrad should be to eliminate any features which may be causing operational difficulties or which do not meet acceptable environmental standards.

The Sewer Inventory and Plan maps show shaded areas of planned future growth requiring extensions to the present sewer system. To serve the expected growth area immediately northwest of Conrad and prevent overloading of the existing system, an interceptor sewer will be required in the approximate location indicated on the plan. In addition, a trunk sewer to serve the growth area further to the north will be required. Since the topography is generally quite flat, minor pumping of sewage may be required; but generally, the entire area can be serviced by gravity to the existing 21" outfall sewer. Additional topographic and sewer grade data are needed to develop a detailed sewerage plan for extensions.

The following criteria are based on the standards of this report and should be adopted in development of sewer extensions.

1. Minimum sewer line size shall be 8 inch diameter.

2. Sewer grades shall not be less than "minimum" as specified in the "Ten State Standards".

Outfall and Treatment Facility

The 21 inch diameter outfall sewer to the waste stabilization ponds is of adequate size for forecasted populations through the 30 year study period. Waste stabilization ponds used for treatment are presently inadequate and need immediate improvement. This may be done by constructing additional depth and using a method of aeration. Present pond area with this improved method of treatment would be adequate for the projected population to 1975. The City of Conrad should anticipate development of additional aerated lagoon cells to double the present pond area. Addition of unaerated cells should be considered if space is available and may be developed economically.

SOLID WASTE DISPOSAL

Conrad's present disposal of solid wastes materials is handled by a land fill method on a site located approximately three miles north-northeast of the city near the sewage oxidation ponds. It lies in the southeast quarter of Section 1, T28N, R3W on the north slope of a coulee. In addition to the land fill operation and sewage lagoons, the Burlington-Northern Railroad runs through the same coulee.

The average length of haul from the city to the site is approximately four miles. The haul route runs generally due east from the city for one and one-half miles, then north along the range line between R3W and R2W, for approximately two and one-half miles until it reaches the short approach road leading to the land fill operation.

Drainage of the land fill operation is excellent. However, there is a small temporary dam across the coulee a short distance from the site which backs up or ponds surface runoff water back to the toe of the land fill operation, thereby creating a potential for pollution of the Dry Fork of the Marias River.

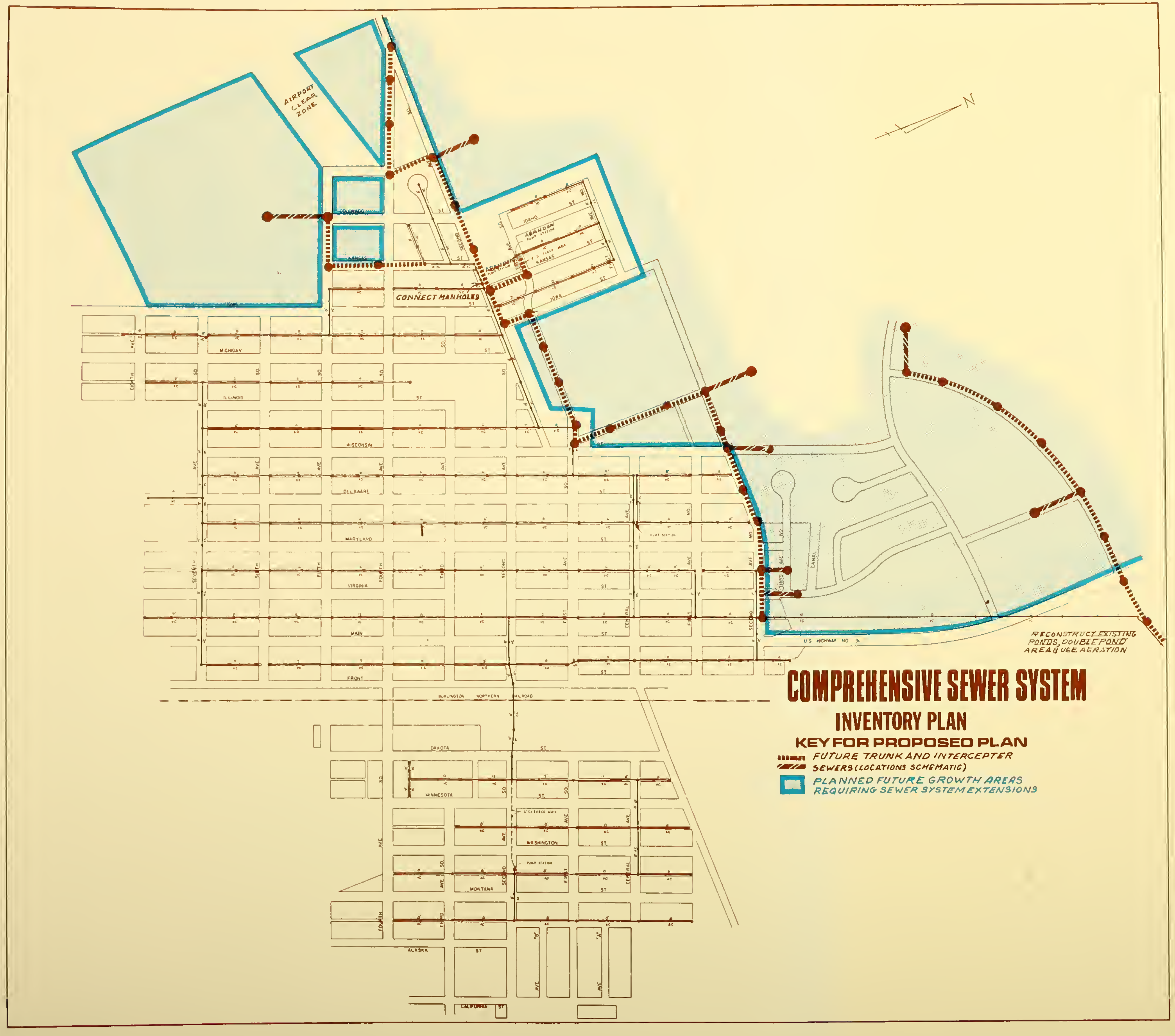
The site is subject to moderate prevailing winds and consequently much paper and other debris is blown away from the operation and across the site. Debris is particularly evident along the west fence.

The land fill operation has limited area for expansion into or across the coulee because of the necessity of maintaining natural drainage through the coulee. Impounding surface runoff in the coulee could result in serious problems to the sewage lagoons and railroad properties.

Existing equipment for the land fill operation consists of a Caterpillar D7 bulldozer and two packer-type trucks of 13 CY and 16 CY capacity. The only building at the site is a warming shack for the caretaker.

Residents from the City of Conrad may use the site without fee, while others are charged according to amount of refuse. The fees are: $0.50 for a small load, $1.00 for a regular pickup load, and $1.50 for a large truck load. Weighing of loads is not performed.

A future land fill site lies approximately one-half mile northeast of the existing site in Section 6, T28N, R2W between the south right of way of the Burlington-Northern Railroad and a natural bluff. This site will be less susceptible to the problem of wind blown debris and has excellent slope for maintaining proper drainage of the landfill operation. There is also more room for expansion at this site than at the present disposal area.



COMPREHENSIVE SEWER SYSTEM

INVENTORY PLAN

KEY FOR PROPOSED PLAN

- ▨ FUTURE TRUNK AND INTERCEPTER SEWERS (LOCATIONS SCHEMATIC)
- ▢ PLANNED FUTURE GROWTH AREAS REQUIRING SEWER SYSTEM EXTENSIONS

It is recommended that control measures be taken to minimize the amount of material blowing across any site in use. This can be done by developing suitable operating techniques at the site or properly installing a temporary fence downwind to intercept the carried material when it leaves the operating area. The fence should be a close-mesh type, preferably wire mesh if burning is required to clean it off.

Before the landfill operations change from the existing site to the proposed future site, it is recommended that a topographic survey be performed of the new site, including property lines and original contours. This topographic map should be used to plan and develop the effect of the completed fill on the adjacent properties. Such important items as finished grades, drainage and future use can then be intelligently planned in advance. Soils exploration and ground water studies should be included with the topographic mapping.

Since there is wide variation in the type and amount of waste materials disposed of at the site, both as to volume and weight, it is recommended that a set of scales, capable of weighing the largest expected loads, be installed at the site with fees for non-residents determined and assessed on the basis of weight. This may help reduce the tendancy by some to save all their waste for one overloaded trip, which causes scattering of debris along the haul routes. Weighing all waste material disposed of on the site will aid future planning and development of other sites.

It is recommended that a storage building be constructed at the site to house equipment and materials. This will decrease the deterioration of equipment by the elements and reduce equipment maintenance.

CHAPTER VII

COMMUNITY FACILITIES

COMMUNITY FACILITIES

Summary of Community Facilities Improvements

Construction of a city-county jail complex.

Inspection and maintenance program for courthouse

New library

Rehabilitation and relocation of space in City Hall when jail and library are built.

Long range new City Hall.

Expanded fire station for new equipment, increase number of firemen, employ a code enforcement officer.

Increase out patient facilities at hospital and add beds between 1980 and 2000.

Consider development of boarding bed elderly housing near the nursing home.

Continued cooperation with school officials to maintain the high level of educational facilities that will result from current building program.

Development of a park system according to the Comprehensive Plan.

General

The life style of a community is usually reflected in the quality and condition of the community facilities. The adequacy of the schools, parks, libraries, utilities and public buildings is an indicator of a community's self-pride and development. Since the construction and maintenance of these facilities consumes most of the local tax dollar, it becomes important that they be well planned to meet future needs.

Community facilities have been grouped into the three general categories in the organization of this chapter.

1. Governmental -- city, county, and federal buildings; fire station; hospital; hursing home; and library.
2. Educational -- public schools
3. Recreational -- parks and recreational facilities.

Public Buildings

Courthouse

Pondera County Courthouse occupies a prominent site in the City Center at the corner of Virginia and Fourth Avenue South. The basement and the two floors comprise the main floor space with a small third floor space making a total of 18,484 square feet. This brick building was built in 1938 and has had good maintenance. Most spaces are adequate and major expansion is not forecast for the planning period.

Occupying a sub-grade floor space in the county courthouse the Sheriff's office and county jail have served reasonably well for a number of years but increased population and current law enforcement and investigation techniques have rendered the present facility inadequate. Additional space is badly needed for storage and for administrative and operational purposes. Presently, the Sheriff's department is located in a single room serving as the Sheriff's office, an interrogation room, a main office, and a communications center.

The jail is obsolete, lacking women's facilities and is generally inadequate to accommodate the present population. This facility will have to be enlarged or replaced to function adequately for the anticipated growth.

City Hall

The Conrad City Hall (8,948 square feet) is located in the heart of the city at 15 Fourth Avenue South across from the courthouse. This three story brick building was built in 1916, and has deteriorated measurably. It houses the water department, city-county library, city jail, council chambers, city offices, and an office for a state planning coordinator. Parking is inadequate.

The city jail (784 square feet) at the alley entrance to City Hall is entirely inadequate. There is no adequate provision for segregation, supervision is difficult, sanitation is difficult to maintain, and the facility offers questionable security.

The present police department consists of the Chief of Police, two full time patrolmen, and one part time patrolman and is located in conjunction with the city jail.

City Hall and Courthouse Recommendations

The Plan recommends a cooperative effort between the city police and the county Sheriff's department to establish a city-county law enforcement center. This center would combine such facilities as communication networks, interrogation room, fingerprinting and general office spaces and thus avoid duplication. City-county jail facilities for women and juveniles would be combined in a single security system for all cells.

This center would serve adequately, not only during the ABM impact period, but also for the next 20 years. The center would be designed for expansion to eventually accommodate all city offices and develop into a City Hall and city service complex.

When the recommended city-county jail complex is functioning, it will allow the present county jail space to be used for other county office expansion. Moving the jail will relieve some pressure on the south parking lot which may become part of an overall parking plan to support the C.B.D.

The Plan further recommends a thorough inspection and maintenance program to assure continued economical operation of the courthouse building.

The Plan also recommends rehabilitation and relocation of spaces in the present City Hall when the jail and library are relocated. The Council Chambers, if larger could be used for other community activities and meetings. The City of Conrad has no museum. The space now occupied by the library could become an educational museum providing the community with a place to display its historical memorbilia, and create a tourist attraction in the center of the city. The continued use of the City Hall will result in increased parking pressure in the C.B.D. area. Thus, implementation of the parking plan, Chapter VIII, is a high priority for C.B.D. planning. It is expected, however, that during the planning period the City Hall will be relocated and coordinated into the Law Enforcement Center.

A conceptual sketch plan for the Law Enforcement Center and City Hall complex is detailed in the Comprehensive Plan, Chapter IX.

Fire Station

An efficient volunteer fire department serves the Planning Area from a relatively new fire station at the northeast corner of Virginia and Fourth Avenue South. One piece of county fire fighting equipment is housed there, and calls outside the city are answered from this station. The cooperative efforts of the city and county should continue both for economy and for better service.

Present major equipment includes:

1935	500 gpm pumper	City owned
1957	750 gpm pumper	City owned
1959	500 gpm pumper	City owned
1971	750 gpm pumper (ordered, but not yet delivered)	City owned

The Fire Insurance Rating Bureau has given Conrad a Class 6 fire rating.

The Plan recommends expanding the existing station to make space for the new equipment as required; increasing the number of volunteer firemen; and as early as possible, employing a code enforcement officer. With improved water delivery, increased number of firemen, and code enforcement, Conrad will be eligible for a Class 5 rating.

The height limitation in the zoning ordinance on the buildings in the C.B.D. could be reconsidered if a hook and ladder truck is added to the equipment.

Post Office

The Conrad post office, located at Fifth Avenue South and Front Street, is a leased facility of 6,140 square feet constructed in 1969. The building is attractive, functional and contributes to the appearance of the community.

With the recent offering of city delivery to residents of Conrad the availability of post office box space has been increased, alleviating previous space shortage. The present post office facility now appears adequate to serve the community for the planning period.

Hospital

In today's community, hospitals serve a vital function. They not only house the ill but provide out patient facilities which help minimize actual hospitalization and replace house calls. As doctors become more scarce and consequently busier, house calls take proportionately too much of their time. The increasing cost of hospitalization has led both people and hospitals to look for ways to minimize hospital admittance. An efficient and well equipped out patient facility helps solve both these problems. Some other factors which influence hospital design are location: accesibility by direct traffic routes from the whole city, environment:

surroundings should be compatible with the hospital and be protected by zoning regulations, and site: should be large enough to provide a quiet buffer, landscaping, parking, and future growth.

Pondera County Hospital, built in 1969, has 48 beds with a staff of 75. The basic facilities (kitchen, x-ray, surgery) are sized to allow for future expansion to 100 beds. The hospital is located on a 4.31 acre site with adequate parking and landscaping in progress. The immediate area is residential, with the Pioneer Nursing Home located adjacent to the hospital.

TABLE 53

DETERMINATION OF AREA BED NEED*
PONDERA COUNTY HOSPITAL

Year	Population Pondera County	Patient Days	Use Rate	Projected ADC	Bed Need
1970	6,611	10,330	1,360	26	43
1980	8,210 projected		1,360	32	50
2000	9,300 projected		1,360	35	53

*The determination formula used by MSDH as established by Form PHS 708-2 is as follows:

a. Multiply current use rate (annual patient days per 100 population) by projected area population and divide by 365 to obtain the projected average daily census (ADC).

b. Divide the projected average daily census by .80 (occupancy factor) and add 10 to obtain number of beds for the area.

Table 53 shows that by 1980, two additional beds will be needed. By 2000, 12 more beds will be needed. A proposed 21-bed addition will add 12 hospital beds and 9 long term care beds. Many factors affect the projected bed requirements, such as actual population growth, and age levels of the population. The U. S. Army Corps of Engineers and MSDH state from past experience that the most urgent need in impact areas is for out patient care.

Pondera County currently is requesting a $140,000.00 grant to add 21 rooms and related nursing facilities and a nursing home day room along the corridor connecting the hospital and nursing home. These rooms could be used for general care by the hospital or long term care by the nursing home. If this addition is built, Pondera County should have an adequate number of hospital beds until the year 2000.

If this proposed addition is not funded, the county should construct an addition by 1980 with emphasis on additional out patient care.

Conrad Nursing Home

The 18,000 square foot Pondera Pioneers Nursing Home was built in 1959 to house 38 beds and since has been remodeled to provide 46 beds with 100% occupancy. The staff consists of 37 full time and 11 part time employees.

The 5.69 acre site provides off-street parking for employees, patients and visitors and will allow for expansion to the north. The surrounding area is residential.

The Pondera County Hospital is located to the west with a connecting corridor to the nursing home so that patients who need hospital care can be moved directly to the hospital. This means the nursing home does not need to duplicate medical facilities. If the hospital addition of 21 beds is funded, a day room for the nursing home is included in the plans and some of the hospital beds may also be available for nursing home expansion.

TABLE 54

NURSING HOME:
DETERMINATION OF AREA BED NEED
LONG TERM CARE

Year	Population	8.3% of Total Pop. Over 65	Patient Days LTC	Use Rate**	Projected ADC	LTC Bed Need
1970	6,611	549	5,475	14,278	22	35
1980	8,210	681		14,278	27	40
1990	8,770	727		14,278	28	41
2000	9,300	772		14,278	37	46

**The Determination Formula used by MSDH as established by Form PHS 708-2 is as follows:

a. Multiply current use rate (annual patient days per 1,000 population) by projected area population and divide by 365 to obtain the projected average daily census (ADC).

b. Divide the projected average daily census by .90 (occupancy factor) and add 10 to obtain number of beds for the area.

Pondera Pioneers Nursing Home is currently licensed for 40 nursing home beds and 6 boarding home beds with an average 1970 nursing home bed occupancy of 52 percent. The remaining beds are used for personal care and boarding home patients. The present home is adequate until 1990 by using all the licensed beds for long term care, however this would intensify a need for boarding home beds. With the increasing population and increasing life span and the growing acceptance and desire for nursing home and boarding home facilities the demand for such facilities is growing rapidly.

In recognition of these conditions an apartment complex, condiminium or similar complex is proposed. The Comprehensive Plan, Chapter IX, allocates land around the nursing home for such uses. Such a complex would be designed for ambulatory and retired people who do not require supervision but do need periodic medication. The nursing home and hospital would be readily accessible for therapy, medication, and emergencies while freeing needed hospital and nursing home beds.

Library

The Conrad Public Library occupies 1,450 square feet in the City Hall at 15 Fifth Avenue Southwest in the C.B.D This building, built in 1916, has been kept in repair but has no off-street parking and no possibility of expansion. These handicaps and those shown in the V.S.C. Table 55, have created a static library that has reached its limitations at one-half the recommended activity and one-third the recommended size. Despite these limitations, the library is circulating about one-sixth more books than average for its size.

The V.S.C. (volume, seating, and circulation) formula was used to provide a base for analysis of the library facility. This formula provides standards for evaluating the floor space, seating facilities, and service rendered by the library. Table 55 compares the V.S.C. standards to existing library operation and shows proposed library facilities planned by the Conrad Library Committee. This proposed library would be suitable for the needs of a population of 8,430, or until 1985. Such a facility should be designed for expansion so that future or unexpected growth can be accommodated.

In 1960 the library took steps to expand its usability by joining the Pathfinder Federation. Membership in the Federation enables Conrad to tap the resources, books, films, micro-films and tapes of other members, such as the Great Falls Public Library. Because the present library lacks adequate space, subject or cultural displays available through the Federation or elsewhere have not been utilized or presented to the public.

TABLE 55

V.S.C. STANDARDS AND EXISTING CONDITION

		VOLUMES		SEATS		CIRCULATION		FLOOR AREA	
	Population	No.	Books per Capita	No.	Chairs per 1000 Capita	No.	Per Capita	Sq.Ft.	Sq.Ft. per Capita
VSC Standards	10,000		3.5-5		10		10		.1-.8
Conrad Public Library 1960	7,653	6,000	.785			32,471	4.3		
Conrad Public Library 1970	6,611	10,928	1.56	24	3.63	33,666	5.1	1,450	.22
Proposed New Library				60				9,100	
Ideal Conrad Public Library 1980	8,210	32,840	Average 4	82	10	82,100	10	6,160	.75
Ideal Conrad Public Library 1990	8,770	35,080	Ideal 4	88	10	87,700	10	6,580	.75
Ideal Conrad Public Library 2000	9,300	37,200	4	93	10	93,000	10	6,980	.75

The construction of a new library is a high priority in improving the city's image and providing for its cultural growth. Additional discussion of library recommendations is found in the Comprehensive Plan, Chapter IX.

Educational Facilities

Traditionally in Montana, schools have been a major force in our communities. In a frontier town a school house was the first sign of permanency, and in a rural area the school house was the center of community interest. The school acted as a meeting house and social hall and often served as a church. Thus, the school house became the visible sign of a stable community.

While school systems retain this force as the educational center of the community and are still a major part of its social life, the building has changed from an enclosed space with fixed desks to a building which has various sized classrooms as well as space for music, art, science, and physical education. New and varied subjects have changed the space needs of schools so that existing school buildings may be obsolete as well as outgrown.

The rising cost of constructing and furnishing schools has caused administrators and taxpayers to consider greater use of school buildings when school is not in session. Summer recreation programs, study groups, adult education, and vocational training are some of the activities which are using school buildings after regular hours.

These additional uses along with the increasing use of automobiles requires more site area for parking. Elementary and junior high school sites need off-street parking for staff, school buses, and visitors; while senior high school sites need additional parking for 30% of their student body.

Thus, powerful influences on today's schools such as changing educational curriculums, increasing use of school facilities by the community, added space needs for automobiles, rapid population changes, and lack of funding are creating larger and larger demands on present facilities.

Existing Characteristics

The existing school system consists of Meadowlark School, Russell School, Lewis School, and Conrad High School. These four schools occupy a total land area of only 14 acres. Table 56 gives an inventory of site area, grades housed, classrooms, capacity, and enrollments. Table 57 gives recommended site areas and enrollments for given types of schools.

TABLE 56

CHARACTERISTICS OF PRESENT SCHOOL FACILITIES

School	Site Area (acres)	Classrooms	Grades	Capacity[2]	Present Enrollment
Meadowlark	*	14	K[1] - 3	350	403
Russell	5.1	8	4 - 5	200	227
Lewis	*	19	6 - 8	475	348
Conrad High	9.0	17	9 - 12	425	466

*Included in Russell School site area
[1] K = Kindergarten
[2] Based on 25 students per classroom

Source: Conrad Superintendent of Schools

TABLE 57

RECOMMENDED SCHOOL SITE SIZES

School Type	Recommended Site Area	Enrollment	Population Serviced
Elementary	12-14 acres	800	---
Junior High	18-20 acres	800	3,000 families
High School	32-34 acres	1,000	4,000 families

A comparison between Tables 56 and 57 shows that site area for the schools in Conrad is badly deficient. Table 57 indicates that according to recommended class size three of the four schools in Conrad are overcrowded. Plans have been made to alleviate these conditions and are dealt with below.

The above data is concerned only with physical and locational aspects of the school system in Conrad. While this inventory does not deal directly with the quality of education, which is largely determined by the content of the curriculum and teachers, it should be evident that there exists a relationship between educational quality and the environment in which the educational experience is conducted. Overcrowded and poorly lighted or ventilated classrooms, insufficient study room facilities, outdated laboratories, and inadequate indoor and outdoor recreational areas are all factors which influence the learning experience.

Enrollment

Enrollment for the past ten years in Conrad is shown in the following table. Enrollment has been relatively steady with the exception of two years: 1965-1966 and 1966-1967. This impact population was the result of the location of the Bureau of Reclamation Rehabilitation Headquarters in Conrad for flood reconstruction projects.

TABLE 58

SCHOOL ENROLLMENT HISTORY

Year	Grade K - 8	Grades 9 - 12	Total
1960 - 1961	894	306	1,200
1961 - 1962	849	323	1,172
1962 - 1963	841	332	1,173
1963 - 1964	835	362	1,197
1964 - 1965	868	362	1,230
1965 - 1966	1,096	398	1,494
1966 - 1967	1,276	424	1,700
1967 - 1968	871	347	1,218
1968 - 1969	853	372	1,225
1969 - 1970	843	395	1,238

Source: Conrad Superintendent of Schools

Enrollment projections for Conrad is complicated by the uncertainty of the actual temporary A.B.M. impact and permanent Safeguard populations. Enrollment projections prepared by the Conrad Superintendent of Schools are given in Table 59.

TABLE 59

PROJECTED SCHOOL ENROLLMENT

Year	K - 6	7, 8, 9	10, 11, 12	Total
1971 - 1972	869	398	390	1,657
1972 - 1973	1,035	470	425	1,930
*1973 - 1974	1,177	557	462	2,196
*1974 - 1975	1,105	570	479	2,154
*1975 - 1976	1,005	555	488	2,048
1976 - 1977	950	533	491	1,974
1977 - 1978	907	515	502	1,924
1978 - 1979	872	495	513	1,880
1979 - 1980	857	470	515	1,842

*Peak Years

Source: Conrad Superintendent of Schools

School Building Program

Conrad will start a school building program in 1971. The school district owns a 12-acre elementary site and a 28-acre secondary school site. The elementary school will be under construction in 1971 and occupied in Fall, 1972. The secondary school will be ready in 1975. This program also includes an addition to the present high school, which will be operated as a 10, 11, 12 high school until the proposed high school is completed and then become a 7, 8, 9 junior high school. At the completion of the building program, Meadowlark will house K, 1 and 2 (450 students); the new elementary school will house grades 3, 4, 5 and 6 (648 students); the junior high school will have grades 7, 8 and 9 (550 students); and the senior high will have grades 10, 11, and 12 (550 students).

The new elementary school is expected to be occupied during the Fall of 1972 when all the 3-6 grade students will be moved into it and Russell will be demolished. Lewis will be operated as a 7, 8, 9 junior high school until 1974 or 1975 when the remodeling of and addition to the present high school is completed for its transformation to a junior high school. This construction will coincide with the new high school so that in 1975-1976 school year these two schools will be in full operation. When the junior high school has been moved into its new home, Lewis will be renovated to contain administration, special education, the multi-media center and central warehouse. This will increase the effectiveness of the site for Meadowlark since it will be the only instructional school building on this site. This brings the student capacity up to 2,198 while the projection for the peak year 1973-1974 is 2,196. By 1980 the school population is projected at 1,842 which will allow a 19% growth factor.

During the years of peak A.B.M. impact, before elementary school construction is finished, the school district plans to use 15 classrooms in religious facilities to handle impact enrollment. Table 60 shows the contingency enrollment distribution.

TABLE 60

CONTINGENCY ENROLLMENT DISTRIBUTION, 1971 - 1973

School	Classrooms	Students
Meadowlark	14 Classrooms @ 30 students	420
Russell	8 Classrooms @ 30 students	240
Lewis	19 Classrooms @ 30 students	570
Subtotals	41 Classrooms now available	1,230
3 Religious Education Bldgs.	15 Classrooms @ 24 students	360
Totals	55	1,590

Source: Conrad Superintendent of Schools

The number of students per classroom shown in Table 60 is above state recommended standards. It is expected that the above building program will rectify this situation and bring the entire school system closer to recommended standards. The expected site area for schools will continue to be below accepted standards, but the adequacy of school facilities should not be substantially impaired. The promotion of an adequate park system should provide enough open space to meet recreational and open space demands.

The location of sites for schools, present and future is shown on the Comprehensive Plan map.

Recreational Facilities

General

Parks are one of the most noticeable attributes of a healthy community. They are a reflection of the natural environment, emphasizing the vegetation, climate, and geographical setting of the community and are an image of the community's pride, and hospitality. Spacious, attractive parks provide spiritual and physical refreshment for the users and are often the only community facilities designed for individual enjoyment. Parks are, thus, a direct investment by the city in each of its citizens.

The justification and rationalization of the need and desire for parks is gradually being taken for granted. That parks serve the mental and physical well being of the populace and provide opportunities to fill leisure time is generally accepted. The visual contrast supplied by open space breaks the monotony of streets and buildings and increases property value. These effects provide an impetus for increasing neighborhood pride and it is becoming evident that home maintenance improves and blight decreases in areas where parks are constructed. Parks provide the opportunity for increased activities and for interaction between people, an opportunity especially important for the youth of the community which promotes constructive activity among young people and helps reduce juvenile delinquency.

Demands on Park Lands

As the realization of the importance of parks has grown, the use of park lands and open spaces has increased. Increased income, increased leisure time, and diversified personal interests have resulted in greater personal use while technical advances have provided apparatus such as snowmobiles and motorcycles which have increased the intensity of use. The same factors increasing personal use have added to the demand for more private land holdings and larger houses which has resulted in the wholesale subdivision and occupancy of large tracts of land. Residential subdivisions are constructed with virtually all the open space parcelled out equally on each lot, rather than concentrating the open space together, where it is more enjoyable and useful. All too frequently in the development of land, short term economic interests are resulting in a loss of long-term public and private benefits. Lands along streams, rivers, and flood plains, which should be kept as open space, are being developed without due consideration of the additional public costs incurred resulting from water pollution or flood damage. As prime park sites are privately taken up, they are lost for public use. As short-term economic interests gain the upper hand public lands are wastefully lost in protecting ill-conceived private ventures. Thus, unless park lands are acquired and preserved now, they will become unavailable or prohibitively expensive and a valuable community asset will be lost.

Development Guidelines

As less land is available for park and open space development and as more land is required for parks as a result of intensified use, the importance of designating and identifying future park sites increases. Additional, potential park sites are available due to state statutes which require at least one-ninth (1/9) of a platted area over 20 acres, exclusive of streets, alleys, avenues, and highways, to be dedicated to the public for parks and playgrounds. Platted areas less than 20 acres are required to dedicate one-twelfth (1/12) of the net platted lands. Recent legislation allows cities to accept cash payments in lieu of platted park areas. Cities can now determine their own park site locations and purchase the land accordingly and are not subject to the whims of subdividers in the placement of city parks.

The possibility of a city, such as Conrad, accumulating a a sizeable park fund makes it desirable to set specific guidelines for acquiring and purchasing new park areas. Such a preliminary set of standards has been prepared, however, a detailed park development, acquisition and maintenance schedule should eventually be developed for the city which will include comprehensive guidelines for park establishment.

1. Open spaces such as flood plains and river frontage should be reserved for public use or uses planned in consideration of long-term public costs.

2. Unique scenic and natural areas should be similarly reserved.

3. Historical landmarks should be labeled and preserved.

4. Parks should generally be designed to fit into the natural setting.

5. Access, both automobile and foot, should protect the resource as well as provide entry for users.

6. Provisions in the park system should increase personal interactions and add to community integration.

7. Diverse activities and a variety of views, panoramas, and environments should be developed by the park system.

Undeveloped land makes up a large portion of the planning area and is also a major part of the life style of the people in the Conrad area. The natural state of the area is important to the continuation of this life style and should be a major factor in all planning decisions.

Type of Parks

Activities normally pursued in park areas range from active functions, such as athletics and games to more passive pursuits, such as walking, bicycling, picnicing, and sunbathing. The need for physical improvements such as buildings, playfield apparatus, and landscaping will vary with the demands on the land and the intent of the park design.

Play lots or "vest pocket parks" are usually found in high density urban areas. This type of park is generally small, one-half to one acre, and provides "sand box" activities for pre-school children and tables and open space for limited short time activities. The service area is limited to the surrounding blocks. This type of park should be provided by the land developer and maintained by the city. These types of parks also are developed in commercial districts to provide open space and rest areas. Although the level of activity is limited in play lot parks, they do provide an aesthetic contrast in denser neighborhoods and commercial areas.

Neighborhood parks are designed to serve a specific limited area and population. This park provides facilities for passive and active pursuits by both children and adults. Elementary or other school facilities often act as neighborhood playfields for children. Neighborhood parks should be within walking distance of the residents of the service area. Site requirements for neighborhood parks vary widely and should be determined on an individual basis according to population served and activities desired. Planning standards suggest a ratio of 2.5 acres per 1,000 population served.

Community parks provide recreation for several neighborhoods. Swimming pools, tennis courts, barbeque grills, extensive athletic or play areas, and other facilities are usually provided to serve both adults and children in active and passive activities. Areas for meetings or large outdoor gatherings should also be provided. Standards recommend a site area from ten to twenty acres, a service area of up to a mile or more, and a population ratio of 2.5 acres per 1,000 population.

City-wide parks are enlarged community parks where special community attractions are housed and where facilities are provided for public programs. Facilities and attractions might include zoos, museums, open-air bandstands, ball stadium, and memorial gardens. Site area would probably exceed 50 acres.

Regional parks are resource based parks created mainly to preserve areas of extraordinary scenic, natural, or historical significance. Large sites are dedicated so that buffer zones and control areas are available to protect the specific resource. These types of parks are not normally "created", but rather outstanding areas are identified and dedicated.

Special facilities, which might be developed around Conrad, include squares, plazas, parkway systems, bicycle trails, greenbelts, scenic views, and river access sites. Site requirements and standards should be derived for the individual site and activity. Development and promotion of such facilities can add greatly to community pride, while preservation of unique features of the Conrad area can give character and individuality to the region.

Shown below are some of the facilities that might be associated with several categories of parks. These lists are not necessarily complete as no set standard can be established because of the diverse nature of parks but the facilities in a park should reflect the intended purpose of each park.

Play Lots (Park)

Tables and benches

Sandbox

Limited play apparatus-swings

Landscaping

Rose graden

Memorials

Neighborhood Parks

Playground
Play apparatus
Shelter
Toilet facilities
Open areas
Softball diamond
Paved multi-use for games, basketball
Landscaping
Walks and paths
Tables and benches

Community Parks

Play area for preschoolers
Apparatus and area for older children
Recreation & meeting bldg.
Adult area (shuffleboard, horseshoes)
Open areas
Group picnic areas
Paved multi-use area
Wading pool
Swimming pool
Tennis courts
Baseball field
Gardens & walks
Landscape areas
Bicycly paths
Toilet Facilities
Ice Skating Rink
Parking Area

Existing Parks

There are six parks within the Conrad city limits constituting a total area of 33.06 acres. One park of 0.94 acres is undeveloped and the athletic complex (23.55 acres) is partially developed. Based on a standard of 12 acres of park area per 1,000 population, Conrad would require 33.24 acres. The existing park area (33.06 acres) is sufficient to meet the needs of the present population. The emphasis in Conrad should be on development of existing parks and the acquisition of future park sites.

TABLE 61

REQUIRED CONRAD PARK ACREAGE

Year	Population	Park Acreage
1970	2770	33.24 (Have 33.06)
1975	3970	35.61
1980	5170	62
1985	5750	69
1990	6330	76
1995	6820	81.8
2000	7310	87.7

This table indicates the need to plan for future parks by acquiring land before prices are set by subdivisions. Within 15 years, 36 additional acres will be needed, so the need to start acquiring land is immediate. Long range planning should provide two and one-half times (87.7 acres) the presently owned land by 2000.

TABLE 62

CONRAD PARKS PROPOSED DEVELOPMENT

Park	Area	Proposed Use
Legion Pioneer	2.9 2.9	Develop these two together as a Community Park and Playfield
Fourth Addn. *B 17, L 11-18	.94	Sell the land and add revenue to Park Fund.
Able Addn.	.67	Sell the land and add revenue to Park Fund.
Arrow Addn.	1.56	Develop as a Neighborhood Park & Playground.
Jones *B 16, L 11-14	.54	Sell the land and add revenue to Park Fund.

*B - Block L - Lot

Legion and Pioneer Parks can be developed as a partial community park because of the pool location. A community park should provide barbeque areas, picnic areas, shelters, wading pool, swimming pool, performance platform or band shell. These two parks are too small to provide all of these, so thought should be given to the location of a community park to serve the expanding population.

The ball field should be developed as a playfield with paved courts for tennis, basketball goals, and grass areas for field sports in addition to the ball fields now provided.

An increasingly popular and practical way to provide park land and at the same time make better use of school land is to develop neighborhood parks along with elementary school grounds. This eliminates duplication of play equipment and gets double use from some of the land area required for schools and parks. Such a park site adjacent to the proposed elementary school site is shown on the Comprehensive Plan.

Proposed park sites are shown on the Comprehensive Plan map and a further discussion of future park areas is found in Chapter IV.

National Recreation Association Standards

The following are standards for recreational developments that have been established by the National Recreation Association. Although these standards are designed for large urban areas, they provide a guide for comparison and a centralized list of types of parks and kinds of recreational facilities.

Facility Type	Acreage Required per 1000 Population	Site Size	Service Radius
Neighborhood Park	1.25 acres	Less than 10 acres	¼ to ½ mile
Neighborhood Playground	1.25 acres	3-7 acres, 5 acres desirable minimum, exclusive of school sites.	½ to 1 mile
Community Park	1.25 acres	25 or more acres 1 site per 20,000 population	1 to 2 miles
Community Playground	1.25 acres	12-15 acres, 10 acre minimum, 1 site per 20,000 population.	1 to 2 miles
Major Urban Park	2.50 acres	100 acres or more, 1 site per 40,000 population	2 to 3 miles

Facility Type	Acreage Required per 1000 Population	Site Size	Service Radius
Special Facilities	5 acres	Varies	Community
Regional Parks or Reserves	10 acres	Several hundred acres.	Region-wide

Recreational Facility	NRA STANDARDS Number/Population
Shuffleboard Courts (Concrete)	1 for each 1,500
Swimming Pools (outdoor)	To serve 3% of pop. at one time with 20 sq. ft./p.
Tennis Courts (Surfaced)	1 for each 2,000
Baseball Diamonds	1 for each 6,000
Softball Diamonds	1 for each 3,000
Public Golf Courses	1 for each 30,000
Shelter Buildings	1 for each 4,000
Recreation Center	1 for each 20,000
Picnic Area	1 for each 2,500
Volleyball Courts	No set standard
Horseshoe Courts	No set standard
Tetherball Poles	No set standard
Outdoor Basketball Goals	No set standard
Handball Courts	1 for each 1,500
Bridle Trail	1 for each 2,500
Boating Facilities	1 for each 2,500
Ice Skating Areas	1 for each 2,500
Wading Pools	1 for each 2,500
Camps	1 for each 2,500

Other Facilities Presently Provided by City:

Fishing Lake	-----------------
Multi-Purpose Area	-----------------
Pre-School Areas	-----------------

CHAPTER VIII

TRANSPORTATION

TRANSPORTATION

The transportation element of this report covers commercial transportation, major streets and highways in the area, parking facilities and air transportation.

Commercial Transportation

The major modes of commercial transportation serving the Conrad area are the Burlington-Northern Railroad, Intermountain Bus Lines and the Great Northern Motor Freight Lines.

The Burlington-Northern Railroad provides freight service from Great Falls to Shelby by way of Conrad.

Intermountain Bus Lines provides passenger service between Edmonton, Alberta and Phoenix, Arizona with two buses daily in each direction. The southbound bus connects with the Empire Builder passenger train at Shelby.

Great Northern Motor Freight runs two trucks a day (one in each direction) between Great Falls and Shelby by way of Conrad.

Other commercial carriers registered with the Montana Railroad Commission and licensed to operate in Pondera County are:

City Transfer Co.: Class C property within the City of Conrad and within a distance not exceeding 10 miles in any direction; Class C property within the City of Conrad and within a distance not exceeding 40 miles; Class B household goods from all points within Pondera County to all points in the State of Montana.

City Transfer & Storage: Class C crude oil, oil well pipe, and oil and gas well equipment between points and places within a radius of 50 miles of Conrad; Class C property within the town of Oilmont and not exceeding 50 miles in any direction.

Consolidated Freightways: Class B liquid molasses and liquid barley syrup from Conrad and places within four miles to all points and places in the State of Montana.

Dick Irvin, Inc.: Class C all products needed in the manufacture and production of liquid molasses and liquid barley syrup from Pondera County over irregular routes and Class C property within the City of Conrad within a distance not exceeding 50 miles in any direction.

Eldon Cook: Class C buildings within the City of Choteau and to all points in Teton and Pondera Counties.

Garrett Freightlines, Inc.: Class A general commodities.

Hi-Ball Trucking, Inc.: Class B registration to carry equipment, materials, and supplies for the construction, maintenance, or demolition of buildings, bridges, irrigation, roads, heavy machinery, petroleum production, etc. in truck load lots between points and places in Montana.

Matador Service, Inc.: Class C water used or useful in the discovery, production, or refining petroleum products from all points and places in Montana.

Milwaukee Motor Transportation Company: Class B property registration to carry fertilizers, clay and clay products, cement, brick products, all kinds of popes, tanks, autos, ores, rock, chemicals, road building equipment, mining equipment, etc. between all points and places in the State of Montana.

Morgan Drive-Away, Inc.: Class B used housetrailers between points and places in Montana.

National Trailer Convoy, Inc.: Class B new and use housetrailers designed to be drawn by automobiles between all points and places in the state.

Suhr Transport: Class C materials used in oil and gas field development and operations within the town of Kevin and between Devin and other fields; Class B material, equipment and supplies used in the discovery of petroleum or natural gas within the City of Conrad and 50 miles thereof.

United Buckingham: Class A property, except commodities in bulk, between Helena and Sweet Grass via U.S. 91.

Universal Supply Service, Inc.: Class C explosives and blasting supplies between all points and places in the State of Montana.

Class A - A person need only file a freight tariff schedule showing the prices (cost of transportation). He also files a time schedule to which he must adhere.

Class B - A person need only file a freight tariff schedule showing charges on freight, but doesn't have to file a time schedule. They do not have a price tariff which they must conform to for the public. Tariffs are set up on a point to point basis (by mileage).

Class C - General commodities, no set tariff.

Major Streets and Highways

The existing highway system serving the Conrad area consists of Interstate 15 (presently under construction but for planning purposes considered as completed), U.S. Highway 91, and Federal Aid Secondary Highways 218, 219 and 534.

Interstate 15 is a controlled access freeway extending from Salt Lake City to the Canadian Border. All sections of this route from Great Falls to Canada are scheduled to be completed by 1975. The section which will bypass Conrad is presently under construction and will have some impact on the location of highway oriented establishments within the planning area.

U.S. Highway 91 is a north-south route extending from Salt Lake City to Canada. In many locations this route is coincident with Interstate 15. In the Conrad area U.S. Highway 91 will continue to provide access to the Central Business District for local traffic.

Secondary Highway 218 connects the rural area east of Conrad to U.S. Highway 91 at the intersection of Central Avenue within the Conrad City Limits. This route is part of the Defense Network of Interstate Access and provides access from Conrad to the Safeguard MSR (Missile Site Radar) site. Locally, this route is known as the Solid Road.

Secondary Highway 219 connects the City of Conrad to the community of Pendroy and U.S. Highway 89 to the west.

Secondary Highway 534 provides a link between Conrad and the community of Dupuyer to the west where it intersects with U.S. Highway 89. Within the Conrad City Limits this route coincides with Fourth Avenue South.

These routes are the major highways serving the Conrad planning area. Within the City of Conrad certain streets now carry or are planned to carry the major traffic volumes. These streets are; Central Avenue, Sunset Boulevard, Fourth Avenue South, Sixth Avenue South, Maryland Street, Dakota Street, Montana Street and the county segment of Fourth Avenue South that follows the west section lines of Sections 24 and 25 just east of the Conrad City Limits.

Functional Classification

For purposes of analysis the Conrad street system can be separated into four functional classifications. Each classification represents a level of service that the street in that category should provide. By segregating the street system in this manner it is possible to analyze each component of the total system and determine if it is capable of fulfilling its assigned function.

The four functional classification levels into which the Conrad street system has been segregated are defined as follows:

Freeway - This is the highest type facility in the hierarchy of the highway system. The function of the freeway is to provide rapid movement of large volumes of traffic between major population centers. It has no function other than to provide unimpeded traffic flow. Freeways have full control of access with no access to abutting property. Access and egress are provided at specified points in the form of grade separated interchanges. Interstate 15 functions as a freeway.

Arterial - The arterial component of the street and highway system provides traffic movement between communities, areas in a community and major traffic generators. Arterials also serve as a link between the long-haul freeways and the land service street pattern. Since the prime function of the arterial is traffic movement, regulation of parking, access control, restriction of turning movements and automatic control devices are sometimes required. U.S. Highway 91 or Main Street functions as an arterial.

Collectors - This classification category forms the transition from the minimum access of arterial system to the complete access of the local street system. The collector provides occasional access points into abutting property but its main purpose is to link the local access street with the arterial street system. Examples of collector streets in Conrad are Fourth Avenue South and Maryland Street.

Local Access Street - The primary function of this facility is to provide direct access to abutting property. It is undesirable to have through traffic moving on these routes. All streets not shown as arterials or collectors are considered to be local access streets.

The streets within the Conrad Planning Area have been classified according to their desirable function. The Major Street and Highway Map shows the functional classification of each street in the major system, existing and projected traffic volumes and recommended improvements on the system.

Traffic Volumes

Estimated 1971 and 1990 traffic volumes are shown on the Major Street and Highway Map. The 1990 traffic volumes were projected as part of the 1970-1990 Highway Functional Classification and Needs Study which was prepared by the Montana State Highway Department.

Estimated 1990 traffic volumes are shown on Interstate 15 which is now under construction. At a location just south of the South Conrad interchange which is located 3.2 miles south of the Conrad City Limits, the 1990 traffic volume is estimated to be 3670 VPD.* Between the South Conrad interchange and the North Conrad interchange the 1990 volume is estimated to be 3370 VPD. North of this interchange the 1990 forecast volume if 4570 VPD.

Traffic volumes on U.S. Highway 91 will show a slight drop between 1971 and 1990 due to the completion of Interstate 15. The traffic volume on U.S. Highway 91 just north of Fourth Avenue South is presently 5850 vehicles per day. In 1990 it is estimated to be 5320 VPD while in 1975 when Interstate 15 is opened the volume at this same location is estimated to be 4700 VPD or a decrease or 2100 VPD with the opening of Interstate 15.

Traffic volumes on Fourth Avenue South are expected to double between 1971 and 1990. At a point on Fourth Avenue just west of U.S. Highway 91 the present traffic volume is 2370 VPD, by 1990 the forecast volume at this location is 4750 VPD.

Solid Road (FAS 218) is presently carrying 1940 VPD with an estimated 1990 volume of 3280 VPD.

Street Capacities

The adequacy of the existing street and highway system to carry the existing and future traffic volumes can be evaluated by comparing the traffic volumes to the capacity of each street in the system.

The capacity of a street is determined by a number of variables. Physical variables such as width, surface condition and channelization as well as operational conditions such as signal timing, the number of left and right hand turns, and pedestrian conflicts all affect the capacity of a given street.

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*Vehicles Per Day.

Since all of these variables cannot be determined for the future street system, an average capacity range based upon the functional classification of each street is used to arrive at an estimated capacity.

TABLE 63

STREET CAPACITY

Facility	Capacity (Vehicles/day)
Urban Freeway (4 lane)	50,000 - 67,000
Arterial (4 lane, no parking)	12,800 - 16,500
Arterial (4 lane, curb parking)	10,100 - 13,100
Arterial (2 lane, curb parking)	8,000 - 10,000
Collector (2 lane, curb parking)	4,000 - 5,000

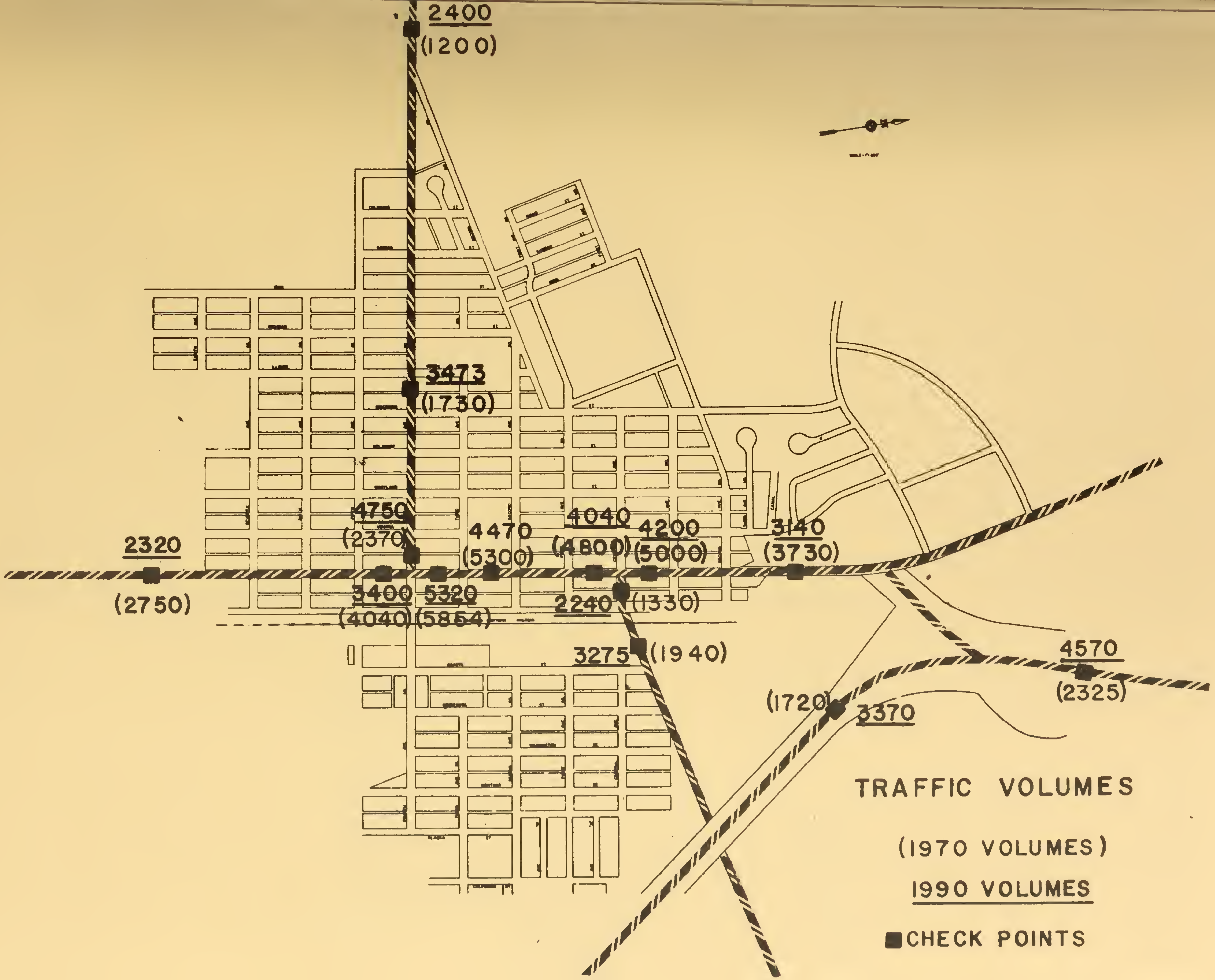
Source: 1964 Highway Capacity Manual

Comparing traffic volumes on the major street and highway system to the estimated capacities shows that no facility in the system will reach or exceed its capacity by 1990. The completion of Interstate 15 will remove through traffic from Main Street allowing this street to maintain its present level of service without loss of parking.

Recommended Street Improvements

Even though the existing street system has adequate capacity to meet existing and future traffic demands, there are sections within the system that are in need of replacement due to structural deficiencies. These streets require constant maintenance which over a period of time amounts to as much as the reconstruction cost of a street of improved design. In some sections, particularly along the north side of Sunset Boulevard and on Wisconsin Street between Sunset Boulevard, the construction of curb and gutter is intermittent. Correction of this will probably require that the entire section be reconstructed. The lack of gutters contributes to the poor drainage on many of the streets within the major street and highway section.

It is recommended that a thorough engineering investigation of the streets on the major street system be made including a drainage study, determination of pavement condition and thickness and investigation of base and sub-base materials. From this investigation priorities for reconstruction and the necessary pavement section designs can be established.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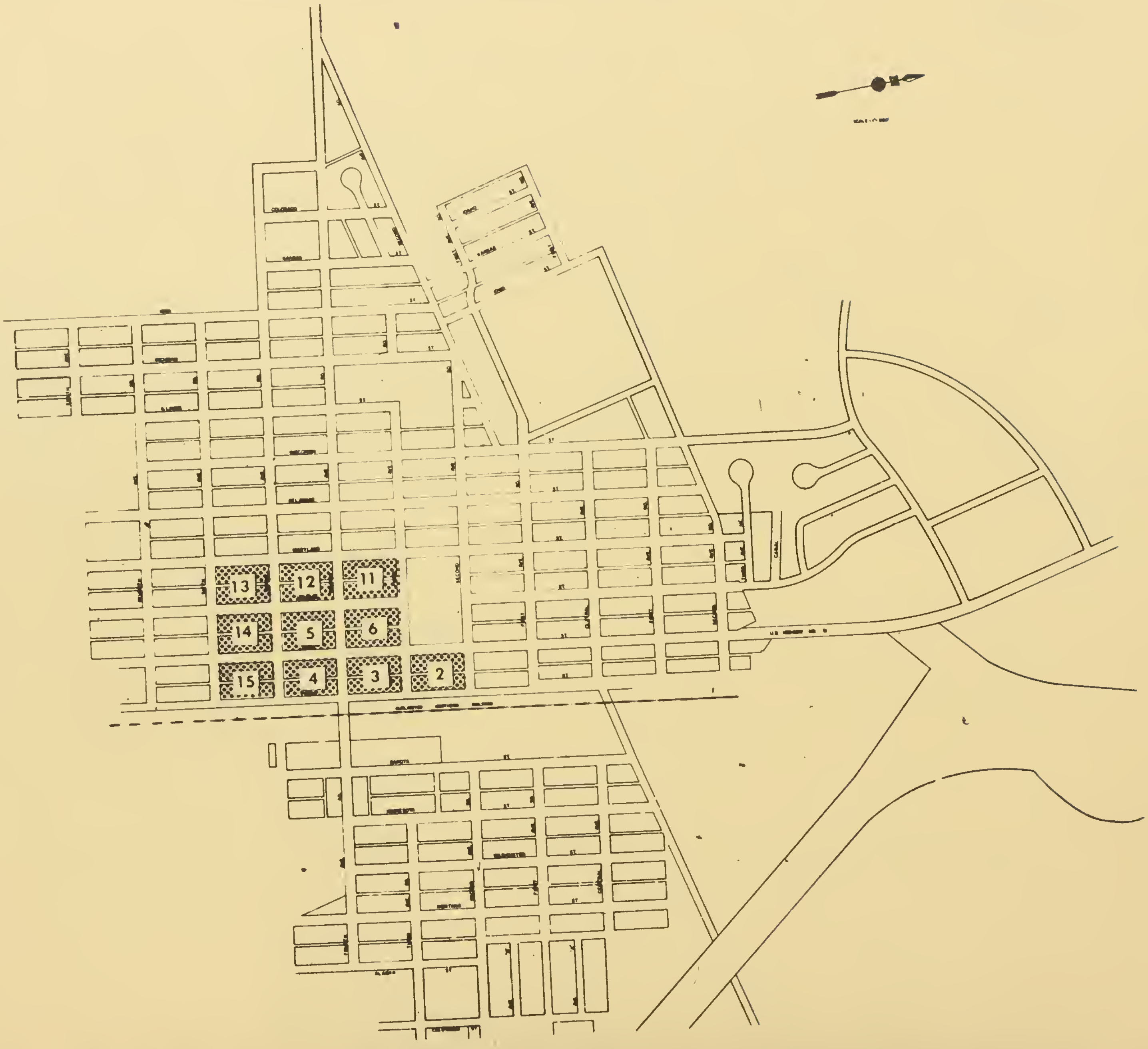
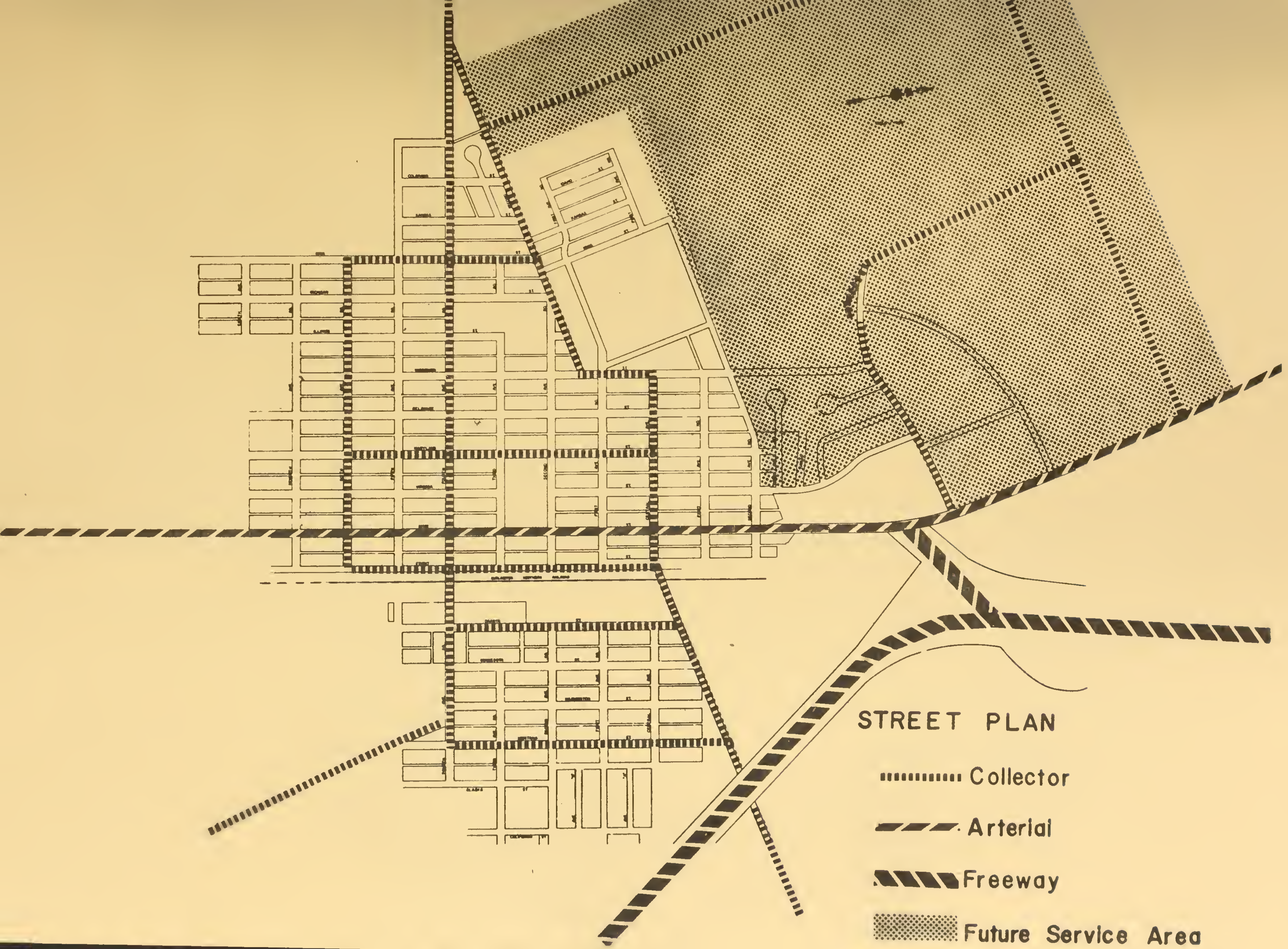
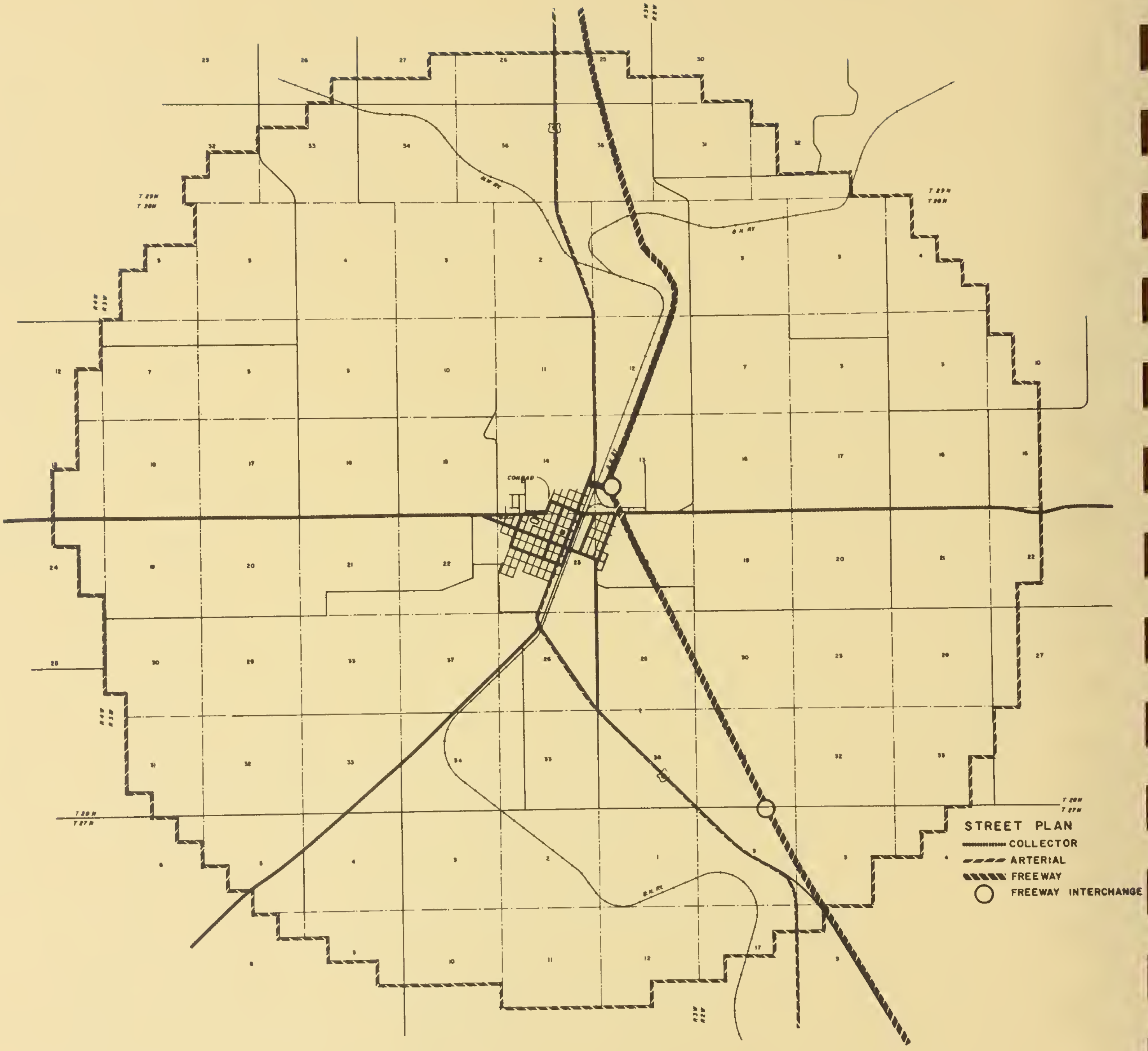
(1200)
3473
(1730)
4750
(2370)
2320
(2750)
3400
(4040)
5320
(5864)
4470
(5300)
4040
(4800)
4200
(5000)
2240
(1330)
3275
(1940)
3140
(3730)
4570
(2325)
(1720)
3370
TRAFFIC VOLUMES
(1970 VOLUMES)
1990 VOLUMES
■ CHECK POINTS

PARKING STUDY AREA




STREET PLAN
Collector
Arterial
Freeway
Future Service Area


CONRAD
STREET PLAN
COLLECTOR
ARTERIAL
FREEWAY
FREEWAY INTERCHANGE
T 29 N
T 28 N
T 27 N
G N RY

The extension of the existing street system is recommended to provide access to the developing area northeast of the city. Planned access to this area would be provided by a collector loop beginning at Sunset Boulevard just west of the Pondera County Hospital, preceding north along the section line common to Sections 14 and 15 for 3/4 mile, then east along the quarter section line of Section 14 for 1/2 mile, then south along the quarter section line to intersect with the extension of Grande Viste Avenue. This loop would provide access to U.S. Highway 91 and also nearly direct access to the Interstate 15 interchange.

Impact of Interstate 15

The completion of Interstate 15 will cause a loss of much of the through traffic now traveling on U.S. Highway 91. Some insight into what changes may take place with the opening of Interstate 15 is provided by impact studies in other communities where an interstate bypass has been constructed. The findings of two such studies are summarized in this section. The first study was conducted in Faribault, Minnesota, which has the following characteristics: A city of 16,926; located 50 miles from the Twin Cities; major industry of agriclutture; County seat and county trade center. From these characteristics it can be seen that Faribault exhibits some similarities to Conrad so that the bypass impact may also be similar. The following effects resulted from the bypass:

1. No drop in gross sales immediately after opening of the alternate highway.

2. A drop in sales of traffic-sensitive firms such as service stations, motels, hotels and restaurants, offset by an increase in sales by non-highway oriented firms.

3. Relief of congestion and creation of a more relaxed atmosphere in the Central Business District, increasing the attractiveness of the trading center.

4. The shifting of some traffic oriented businesses to locations near the bypass access points.

5. A shift of residential development to new areas provided with access from the bypass.

The second report entitled, "Community Consequences of Highway Improvement" published by the Highway Research Board, National Academy of Sciences and the National Research Council analyzes 45 bypass studies conducted throughout the United States. The following statistics for towns within the population range of 5,000 to 10,000 were taken from this report:

1. Total Retail Sales - Out of a total of six towns, five showed increases in total sales ranging up to +38.0 percent, with one town showing a -13.0 percent loss. The average change in retail sales for all six towns was +16.0 percent.

2. Service Station Sales - Two towns out of four showed increases in service station sales ranging up to +17.0 percent; the other two towns showed losses of up to -21.0 percent. The average change in service station sales for all four towns was +1.8 percent.

3. Restaurant Sales - One out of four towns showed a gain of +2.4 percent while the remaining three showed losses of up to -26.0 percent. The overall average of four towns was a loss of -9.2 percent.

4. Non-Highway Oriented Sales - Four out of four towns showed increases ranging from +1.0 percent to +20.0 percent. The average increase of all four towns was +11.2 percent.

The following excerpt was taken from the Highway Research Report summary:

> *"Service stations and restaurants were often sufficiently able to adjust to changed conditions by reorienting their merchandise to local trade, although this precluded economic reorientation. Service stations promoted tires, repairs, and parts rather than gasoline. Restaurants switched to lunch and dinners instead of short orders. Motels and hotels suffered the greatest losses".*

It is significant to note in studies conducted where a control was used; i.e., where the affected area was compared with an area unaffected by the bypass, it was generally found that the rise and fall of sales was primarily due to local economic conditions. The point is that the figures presented above showing percent of increase and decrease of sales also reflect the increases and decreases due to the economic climate of the area and should not be construed as being entirely the result of the bypass.

The Comprehensive Plan takes into consideration the shifting of highway oriented land uses due to the location of the Interstate 15 interchange.

Parking

Parking is frequently overlooked as a highly productive and essential land use in the Central Business District. In this auto-oriented age, the downtown lacking an adequate supply of well located parking encourages the development of satelite shopping areas, diluting the downtown, sometimes to the point of deterioration accompanied by a drop in the community's tax base.

A parking usage survey was conducted to quantify and locate existing parking needs and to provide base data upon which to project future parking needs.

Observations of curb parking on Main Street between 3rd and 6th Avenues indicated that the peak parking period occurred between 2:00 and 2:30 P.M. This is consistent with the findings of more comprehensive parking studies conducted in other Montana cities*. Counts of parked vehicles were taken at 1:00 P.M., 2:00 P.M. and 2:45 P.M. The highest usage was tabulated as representing the peak hour.

Curb parking was inventoried based upon a 22-foot space while off-street spaces were counted where marked or calculated allowing 300 square feet per vehicle where no marked parking pattern existed. Table 64 shows the number of vehicles parked at peak hour vs. the number of spaces available.

TABLE 64

PARKING INVENTORY AND PEAK HOUR USEAGE

Block No.	Spaces Curb	Spaces Off-Street	Total Spaces	Vehicles Parked	Percent Useage
2	7	--	7	7	100
3	53	25	78	58	74
4	58	20	78	32	41
5	57	55	112	93	83
6	56	65	121	80	66
11	19	--	19	3	16
12	19	--	19	17	90
13	19	--	19	4	21
14	46	10	56	23	41
15	27	10	37	27	73
Total	361	185	546	344	63

A total of 344 vehicles were parked at 546 available spaces representing a 63 percent peak hour useage. This assumes that the 546 spaces are used at 100 percent efficiency. It has been found in other studies that due to the time required to get in and out of a parking space, the actual efficiency with which

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*Helena Parking Study - Montana Highway Department, 1960
Great Falls Transportation Study.

and out of a parking space, the actual efficiency with which parking spaces can be used is about 90 percent for off-street parking spaces and 85 percent for curb parking spaces. This results in a total available supply of 469 spaces and a practical useage rate of 73 percent. Table 65 shows parking useage rates in four other cities where comprehensive parking surveys were conducted.

TABLE 65

PARKING USEAGE RATE COMPARISON

City	Useage Rate - %
Conrad	73.3
Helena (1960)	70.0
Idaho Falls (1966)	59.5
Missoula (1965)	59.0
Great Falls (1962)	87.0

Table 65 shows that compared to the four other cities, Conrad ranked second in terms of parking space useage. The parking studies in the four other cities showed that Helena had a shortage of 250 spaces, Idaho Falls had a deficiency of 454 spaces, Missoula was deficient 307 spaces and Great Falls was short 500 parking spaces. The relative high useage rate in Conrad can be imterpreted as a shortage of parking spaces in the high demand areas.

During the parking survey it was observed that parkers were reluctant to accept walking distances in excess of one-half block (140 feet). Before doing so the parker would circle the block and return to the block face in search of a vacant space. This places the curb parking spaces on Main Street at a high premium and also results in added traffic congestion.

The results of the parking survey indicated that there would be no shortage of parking at the present time if parkers were willing to accept walking distances of up to 2 blocks from the parking space to destination. This, however, is not the case. It was observed during the survey that many of the parkers in the high demand area were exceeding the posted two-hour limit, indicating that employees of downtown businesses and other long term parkers are occupying spaces that should be reserved for the paying customer and other short term parkers. The importance of maintaining a high turnover rate at the high demand parking spaces is emphasized by the fact that a high turnover parking space in the Central Business District has been shown to produce up to $10,000 per year in retail sales.

Interviews with several members of the business community revealed a definite opposition to the installation of parking meters. The main purpose of meters would be to increase the turnover at high demand locations. To effectively do this a meter must be accompanied by a high degree of enforcement to prevent "feeding" of the meters which results in a low turnover rate. Thus, the installation of meters in itself would not solve the existing problem.

Another method can be used to evaluate the existing parking supply vs. demand. A common rule of thumb used to estimate parking needs is to provide one square foot of parking area for each square foot of commercial floor area. The land use inventory determined that there were 160,268 square feet of commercial floor space within the area covered by the parking survey. Converting parking spaces to square feet results in a total parking area of 134,920 square feet. This represents a 1 to 0.84 ratio of commercial floor space to parking area. To provide a 1 to 1 ratio would require the development of 85 additional parking spaces. An additional 65 spaces will be required to meet intensified commercial activities that will take place in the existing commercial establishments. In addition any new commercial development should be required to provide sufficient parking spaces to meet the requirements of the proposed zoning ordinance.

Recommended Parking Improvements

Based on the parking survey the following recommendations are made.

1. Increase the enforcement of the two-hour curb parking time limit. A parking officer should be hired for three days a week, six hours per day, to mark tires and ticket all vehicles exceeding the two hour parking limit. A retired, senior citizen or housewife would be ideal for this position. Working days should be staggered to prevent frequent parkers from becoming familiar with the patrol pattern. The revenue from fines should be sufficient to pay for the increased enforcement. The hours and days of enforcement should be adjusted based upon the parking officer's observations.

2. A parking and traffic authority should be established by the City Council as provided by Chapter 37 of the Revised Codes of Montana, 1947. The purpose of this authority will be to manage all public parking and to make policy decisions with regard to both parking and traffic operations. The first objective of the authority should be to increase the level of enforcement as recommended, secondly, the authority should instigate the development

of additional off-street public parking areas. The parking authority will have several alternate methods which can be used to develop additional parking; through revenue bonds (with this method a parking fee would be charged) or through a special improvement district in which the benifiting property owners would pay for the parking facility proportional to the benifit received. (Sections 11-2201 and 11-2214 R.C.C., 1947)

3. The Masonic parking lot and the unrestricted parking area along the alley of Block 6 would gain much higher useage if the businesses fronting on Main Street between 3rd Avenue and 4th Avenue would provide attractive rear entrances with proper identification. Two possible sites that should be explored by the parking authority are the auto sales lot on the corner of 5th and Main and the farm implement storage area located on the east half of Block 3. These two areas are mentioned because the existing use is storage of vehicles and equipment and the conversion to a parking area would be fairly inexpensive.

4. A program to pave and improve the alleys behind the businesses fronting on Main Street within the parking study area should be undertaken. A small amount of landscaping, improvement of rear entrances to Main Street businesses, control or garbage containers, and designated customer parking areas would result in a substantial amount of additional off-street parking in vacant areas that are not presently being used.

Conrad Airport

The airport is located approximately one mile west of the City of Conrad. It has two runways, Runway 05/23 which is 75 feet wide by 3600 feet long and is paved with asphaltic concrete over a cement stabilized base; and Runway 14/32, which is a turf landing strip, 200 feet wide by 2800 feet long. There are 23 local based aircraft. The airport is an uncontrolled one, but radio contact may be made on Unicom frequency of 122.8 MgHz. Runway 05/23 has medium intensity lighting.

Both runways are oriented to conform to a wind rose from Cut Bank airport, some forty miles northwest of the site. Continuous wind data has not been recorded at the site since its construction.

The main paved runway (Runway 05/23) has developed many temperature cracks, i.e., cracks resulting from the contraction-expansion of the pavement due to extreme temperature changes.

These cracks have allowed surface water to percolate down through the pavement into the underlying base course and subgrade. Consequently, with extreme long cold winters much frost heave has taken place, increasing the cracking and at the same time causing extreme undulations in the grade of the pavement surface. The runway was overlaid with an asphaltic concrete in 1968, but cracks have reflected through. Drainage on the airport is bad, in particular along the runway where it should be excellent to minimize water infiltration under the pavement section by capillary action.

In accordance with the National Airports System's Plan now in effect, the main runway (Runway 05/23) should be extended to a length of 4700 feet to meet the requirements of a Basic Utility, Phase II, airport. Obstructions which project into the operating area directly above and adjacent to the airport should be checked for possible encroachment above the imaginary surfaces as defined by Federal Aviation Regulations, Part 77. Land and/or easements will have to be acquired as necessary for the extension and clear zone requirements.

Recommended Airport Improvements

It is recommended that the following actions and improvements be made:

1. That the Airport Layout Plan be updated in accordance with the FAA AC 150/5310-2 advisory circular.

2. That the airport be included in a regional airport study for the ABM impact area.

3. Analyze wind data available from the site in conjunction with wind roses from other airports close to Conrad, other local information and the wind rose being used. If there seems to be a marked difference between these, wind data recording equipment should be installed as soon as possible to support the wind rose in use or develop a new one.

4. Strengthen the existing runway (Runway 05/23) by either reconstruction or overlay type construction and improve drainage along the runway by constructing drainage ditches and installing necessary storm drains and appurtenances.

5. Obtain land for: airport development, extension of Runway 05/23, and clear zone requirements.

6. Construct an extension of Runway 05/23 to give it a total length of 4700 feet.

7. Construct a taxiway and general aviation apron.

8. Institute zoning ordinances to protect the future operation and development of the airport.

CHAPTER IX

COMPREHENSIVE PLAN

THE COMPREHENSIVE PLAN

The Planning Area

The area in which most development is expected and planned is shown on the Conrad Comprehensive Plan map. This area includes only a portion of the total jurisdictional planning area. However, only four major developments are expected to occur in areas not shown on the plan map. These four developments are: airport improvements, water supply line improvements, sanitary landfill dump improvements, and sewage disposal improvements. All four of these developments require detailed studies before actual land use allocation, design, or location can be accurately determined. Conditions concerning these developments have been dealt with in as much depth as this study permits within their respective sections in this report. The effect of improvements in these facilities on other land uses has been considered in the development of the Comprehensive Plan.

The plan map does not include these developments but instead seeks to give a detailed description of all other expected developments in the jurisdictional planning area. The areas not shown on the plan map within the Conrad Jurisdictional Planning Area are expected to remain essentially agricultural with developments, except as noted above, limited to farmstead improvements.

Land Use Forecasts

Table 66 shows land use areas, percentages, and per capita allotment for 1971 and the forecasted figures for the year 2000. As shown in the table, the per capita land allotment is expected to decrease from 162 acres per 1000 population in 1971 to 148.4 acres per 1000 in 2000. This decrease is due to increased utilization of present commercial, industrial, and public and semi-public land areas and to corrective measures being employed to reduce unnecessary land consumption, such as decreasing the amount of land devoted to residential street right-of-ways.

TABLE 66

LAND USE FORECASTS

Land Use	Total Acres	Acres/1000 Population	% of Developed Area	Total Acres	2000 Acres/1000 Population	% of Developed Area
Residential	183.2	59.9	36.9	440	60.2	40.6
Commercial	34.6	11.3	7.0	70	9.6	6.5
Industrial[1]	30.0	9.8	6.1	75	10.5	6.9
Public, Semi-Public	62.3	20.4	12.5	105	14.4	9.7
Parks, Developed Open Space	9.3	3.0	1.9	88	12.0	8.1
Streets	176.3	57.6	35.6	305	41.7	28.2
Total	495.6	162.0	100.0	1,083	148.4	100.0
Population	3,060[2]					

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[1] Includes railroad land.
[2] 1971 population estimate derived in Chapter V.

Land Use Observations

Based on studies and analysis presented in this report, the following observations are made:

1. Due to expected rapid population increases, extensive new acreage will be needed for residential housing.
2. Future housing developments should be coordinated with sewer and water extensions and should be located where efficient and low cost utility service can be provided.
3. The areas directly north of the city are the optimal locations for future residential sites.
4. The Interstate 15 interchange will result in increased commercial land demand north of the present Central Business District.

5. The Conrad C.B.D. has a high level of sales and a strong revenue generating capacity, and thus should be maintained as the primary business and retail district in the city.

6. A lack of parking exists in the C.B.D. Adequate and accessible parking should be provided to enhance the attractiveness of the C.B.D. and help maintain the present high level of retail sales.

7. Industrial uses are generally clustered along the railroad tracks and should continue to be located in homogeneous districts designed exclusively for their use.

8. An immediate need for increased park areas exists with an accompanying need for a park development and acquisition program.

9. A site for a combined city-county jail facility with room for future expansion to accommodate the City Hall should be acquired immediately, before land values appreciate further.

10. A new site and building for the county library is immediately needed.

11. Most of the community amenities in Conrad are located west of the Burlington-Northern tracks, making the area east of the tracks relatively undesireable for residential development.

12. The area east of the Burlington-Northern tracks is well suited for industrial development possessing adequate rail and street facilities.

13. Too much land has been devoted to street right-of-way in Conrad. Future street development should follow modern design criteria and use less land for residential access streets.

The Land Use Plan

Residential

Residential areas in Conrad have generally been homogeneously developed and are thus, quiet, relaxing, and healthy places to live and raise a family. Continued neighborhood integration and continuity should be maintained and promoted. With the anticipated population growth residential development will become more rapid and varied than in the past, creating problems for the extension of contiguous neighborhoods.

The plan distributes residential land use into four categories: low density single family, residential neighborhoods; medium density single family, residences; garden apartments, condiminiums, and other multiple family units; and mobile home parks. Each use is regulated to its most desireable and optimal location in relation to the city as a whole. Locations have been based on the Plan Guidelines outlined in Chapter I, and upon considerations regarding traffic access, property values, desired environmental conditions for each type of residential development, expected housing demands, and availability of community amenities and utilities.

The average density of present residential development has been maintained in forecasting residential land use. Density in future single family residential locations will be lower than at present while densities in the mobile home parks and multiple dwelling units will be greater than present averages.

Mobile home parks have been distributed to areas where access is available and traffic congestion will be minimal. During the years of temporary A.B.M. impact population, mobile homes are expected to be prevalent while in the later years of the planning period mobile homes in their present state of design will decline substantially. It is foreseen that mobile home parks may in time become converted and re-designed into more customary neighborhoods or converted to other forms of use. The locational placement of mobile home parks reflects their temporary stature.

The rational for the placement of forecasted multiple dwelling units in Conrad is threefold: One, such units provide higher density housing in areas where space and distance is valuable; two, they act as buffer zones between single family residential neighborhoods and other non-conforming uses; and three, they supply lower cost housing facilities for young, retired, or small families. In accordance with the above criteria, multiple dwelling structures are planned for areas adjacent to commercial areas, adjacent to the hospital and nursing home, and within easy access of the school system where young adults might be employed.

The main area for residential expansion is the presently vacant agricultural land north of the present city limits, extending from Highway 91 to the western tip of the city limits. Ten 40 acre parcels in this area have been planned for development to provide the forecasted residential acreage requirements. This area is within easy reach of community amenities with future school sites already procured. The area has minimal residential development problems with the best potential for extending utility and street facilities of any area in the city. There are no major obstacles for continuing the present residential design of the city into this area.

The irrigation canal running through this area can be developed into an outstanding asset to the surrounding residential development. The canal and its banks are planned for open space with landscaping to create a "green belt" through the proposed low density, single family neighborhood. Bicycle trails and similar activities are planned along the length of the canal with construction of a community park incorporating part of the green belt.

In three areas around Conrad, residential development should be limited or discouraged and in one area all development should be severly limited. In the area west of the Conrad city limits residential development is restricted due to height limitations imposed by the location of the flight path for the Conrad Airport. Limited residences are planned for areas adjacent to the clear zone but further restrictions may limit the plan as airport improvements are designed. South of the city limits along Pondera Coulee developments of all kinds should be discouraged as the area is subject to flooding and has a high water table. Pondera Coulee and its stream bank area is planned for natural, undisturbed open space. The natural environment, recreational opportunity, and aesthetic setting along the creek should be left undeveloped and unspoiled for the continued enjoyment of the citizens of Conrad. Residential development in the city east of the Burlington-Northern tracks should be limited, although residential developments are presently located in the area. The deterious conditions already mentioned make this a relatively undesirable location for residences. In light of present use in the area, continued mobile home development is planned along with some multiple family dwelling units. Alternative uses more compatible with the conditions of this area are proposed by the Plan and in the Potential Developments section.

Commercial

Commercial areas on the Plan map are shown in two forms; intensive and extensive. Intensive commercial activities are generally located in the Central Business District and include primary retail and those retail, office, and service uses associated with a downtown shopping area. In the plan, the C.B.D. has been broadened and given depth to expand intensive commercial uses in the areas along Front Street between Second and Seventh Streets South. Off-street parking areas surrounding the C.B.D. core are a major input to generating increases in pedestrian traffic and drop-in trade which will maintain the viability of the C.B.D.

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Commercial

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Intensive commercial uses are also planned along the east side of Main Street from Second Street South to the interstate interchange and surrounding the interchange. Convenience retail, motel-hotel, and commercial recreation uses should be located in this area and coordinated to support the retail and office uses of the C.B.D. The maintenance of the shade trees along Main Street and further landscaping is a major priority in developing an attractive commercial district along Main Street, and around the interstate interchange.

Extensive commercial areas should provide for large amounts of land area in relation to productive floor space and for adequate vehicular access and parking. Extensive commercial uses include secondary retail as well as the semi-industrial or jobber operation with pick-up and delivery, assembly and repair, and some service uses.

In light of the requirements of extensive commercial uses and their large contribution to the business community, a new location for such uses has been planned along Solid Road east of the Burlington-Northern tracks. Solid Road is presently being improved and will become a major collector street providing good access capable of handling large traffic demands. The areas adjacent to Solid Road provide adequate storage and display space for equipment, auto, or similar sales uses. The area has good access for truck or freight deliveries or shipments and good access to the city and surrounding areas for jobbers and service uses.

Additional area along Front Street adjacent to the Western Montana Railroad right-of-way is also planned for extensive commercial uses. This area is readily accessible to rail facilities. Areas along Front Street near the C.B.D. should be reserved or renewed for intensive commercial or parking uses to support and expand the C.B.D.

Industrial

The land allocations and forecasted acreage for industrial use in the planning area are optimistic. Land areas should be designated and recognized as industrial sites so that industrial development can be planned and surrounding land uses adjusted. The actual boundaries and extent of new industrial sites east of the Burlington-Northern tracks are suggestive only, with actual locations being dictated by the locating industry. The area east of the tracks is well suited for most non-residential uses, although utility extensions and improvements may be more expensive than elsewhere in the city. The area just north of Solid Road and east of the Burlington-Northern tracks is also planned for some added industrial land use and should be annexed into the city. Industrial development in the city should be limited to areas east of the tracks and relocation of non-conforming industrial uses should be to this area.

Public and Semi-Public

The land use plan regarding public and semi-public land uses is based on the needs outlined in the Community Facilities chapter. Conrad presently has a substantial amount of land in public and semi-public land use and thus, a decrease in the amount of land per capita devoted for such uses is forecast. The land use plan map shows four categories of public and semi-public land use: public buildings, schools, public shops, and churches. Fraternal and similar semi-public uses are not shown but are expected to continue to locate in the C.B.D. in conjunction with commercial uses.

The plan recommends two new public building sites; for the library, and for a city-county jail facility and City Hall complex. It is recommended that the library be situated on a site near the center of population, on or just off a collector street to provide adequate access, and, if possible, to act as a buffer area between residential and commercial uses. The site presently under consideration on Virginia Street between the Court House and the fire department is needed to provide downtown parking. One possible site is located on Maryland Street just north of Lewis School. This proposed site consists of four vacant lots and one older residence located on two lots. This site is favorably located in relation to access and population. The possibility of developing a joint parking lot serving the library and school district is an added consideration, especially when Lewis school is converted to administrative offices. Another possible site is the vacant half block adjacent to St. Michials Catholic Church. The exact site for the library should be further intestigated, especially in regard to land values, site acquisition costs, and neighborhood repercussions as a result of the library location.

A proposed site for the city-county jail and city hall complex is located immediately west of the interstate interchange. This site provides good access to the city and county for the sheriff and police departments, is close to the commercial areas, and would present a good, first image to the city visitor. A small park is proposed adjacent to the complex to be used for relaxation by city visitors and city hall users. It is suggested that meeting rooms that could be used for city business as well as community affairs be incorporated into the complex. The site and surrounding area is presently used for miscellaneous outdoor storage and residential use. The development of the complex could be a stimulus for creating a more attractive area at the interstate interchange, which is presently in a state of relative deterioration. The site should be acquired before land values appreciate further.

Just north of the interstate interchange an area with good potential commercial frontage is presently being occupied by the city shops. It is recommended that this land be sold and the shops moved to the area east of the Burlington-Northern tracks. Moving the shops would provide an alternative use for areas not suited for residential use, would free prime commercial frontage for development, and generate funds for acquisition of other needed public building sites. The county shops are presently located east of the tracks and when the city shops are relocated, consolidation of city and county shops should be investigated.

Two new school sites have been procured with further development already scheduled. Both of these sites are north of the presently developed city and are excellently situated in relation to planned future growth. In conjunction with proposed high school development, it is recommended that First Street not be extended through to Wisconsin Street at Kortlever Addition. Extension of First Street would create an irregular and hazardous intersection. Streets adjacent to the new school sites should be designed according to the Transportation Plan, Chapter VIII, to minimize congestion and safety hazards and facilitate neighborhood continuity and development. Playground developments at the new elementary school site should be coordinated with the development of a nearby neighborhood park site (see Park Plan below).

Present church locations are shown on the plan map as well as some suggested areas for church expansion and relocation. As mentioned in the Plan Guidelines, Chapter I, churches can provide attractive interruptions in homogeneous neighborhoods, and provide effective buffer developments between residential and commercial areas.

Parks

The area along Pondera Coulee and along the irrigation canal north of Conrad are two areas offering prime recreational features. The area along Pondera Coulee should be left in its natural state and preserved for open space with a native environment. The irrigation canal is planned for landscaped open space, bicycle and walking paths, and a unique neighborhood amenity. A community park incorporating part of the developed canal is shown schematically on the plan. The park should be centrally located along the canal to serve the surrounding population and act as a neighborhood focal point, setting an image for residential character. This park should provide neighborhood park facilities as well as facilities emphasizing the canal setting that will be available to the entire community.

Three new neighborhood parks are planned to serve the population in the northern part of the city. One proposed park, located just west of Pondera County Hospital, should be oriented to serve the older population expected to locate around the hospital and rest home. A proposed neighborhood park just west of Wisconsin Street across from the proposed elementary school should be coordinated with the elementary school's playground facilities. The location of the park is shown only schematicly, but the actual site should be near the elementary school and easily accessible to the people in the area. The third proposed neighborhood park is planned to serve the proposed higher density mobile home parks west of Highway 91. The park site is located on a semi-triangular plot of land at an irregular intersection of a local street and collector street. The site utilizes an irregular piece of ground, provides an aesthetic neighborhood contrast, and acts as a transition zone between high and low density residential areas.

A sandlot park is proposed for the half-block adjacent to St. Michael's Catholic Church. This vacant area is presently used for such purpose and should be permanently designated and maintained for such use.

The possibility of a city-wide park is discussed in the following Potential Developments section.

Streets and Parking

Street extensions, and improvements, as well as future parking demands are dealt with in the Transportation chapter.

Potential Developments

Several developments are possible in Conrad which could slightly alter the design of the Comprehensive Plan, as well as improve the quality of environment in the planning area. The following considerations should be regarded as potential supplements to the Comprehensive Plan. These potentialities are dependent on economic conditions and social desires which are not entirely predictable at this time. The considerations should therefore be considered ideal proposals rather than practical suggestions.

The area east of the Burlington-Northern tracks presents a planning delimma. The area is unfavorable for residential uses but is presently used for residential purposes. Industrial, commercial, and public shop uses have been distributed by the Plan to this locale to the extent possible according to forecasted land use needs. However, there is a substantial area of land that is used for residential sites for which alternative uses have not been determined. The investments of people in this area should be recognized and alternative forms of land use identified so that financial returns can be realized.

In light of the above conditions the development of a county-wide recreational development is suggested, including a city-wide park, travel-trailer and tourist camp, and other private recreational facilities. The possibility of creating a large pond or similar water body should be investigated along with the potential for attracting tourists, highway travelers, and surrounding residents to use such a recreation area. The suggested development site would involve the area from Washington Street, shown as residential on the plan map, and extending eastward as needed into the agricultural fields. The present trailer hook-ups and other utilities in this area could be utilized by a private commercial camp and possibly a motel. The citywide park would be oriented toward water activities provided by the pond; swimming, canoeing, paddle boats, fishing, ice skating, etc. The park could also have extensive open spaces, picnic and barbeque areas, with possible rodeo, fair grounds or similar public gathering areas. The park would cater to one day family excursions and special community events. The location of riding stables in conjunction with park trails and rodeo facilities could also be incorporated. Montana Street could be re-routed to provide access to the commercial enterprises and circulate traffic through the park. The area would be visible from Interstate 15 to further attract visitors.

Another possible development in Conrad is the establishment of a shopping center. With the modern trend in selling and the expected population increase in the region, the feasibility of such a center increases. Shopping centers in many cities have tended to locate on the fringes of the city where large areas of relatively inexpensive land is available. Such locations have often resulted in a decrease in trade and activity in the Central Business District. It is strongly recommended that if a shopping center does develop in Conrad that it be located adjacent and contiguous with the C.B.D. at a site on Main Street south of Fourth Avenue South. Such a location would prevent deterioration of the C.B.D. while increasing the number of shoppers in the city. With the implementation of the Comprehensive Plan, land along Main Street will become available for intensive commercial use as extensive commercial uses are relocated. Plan implementation will also eliminate the present parking deficiency,

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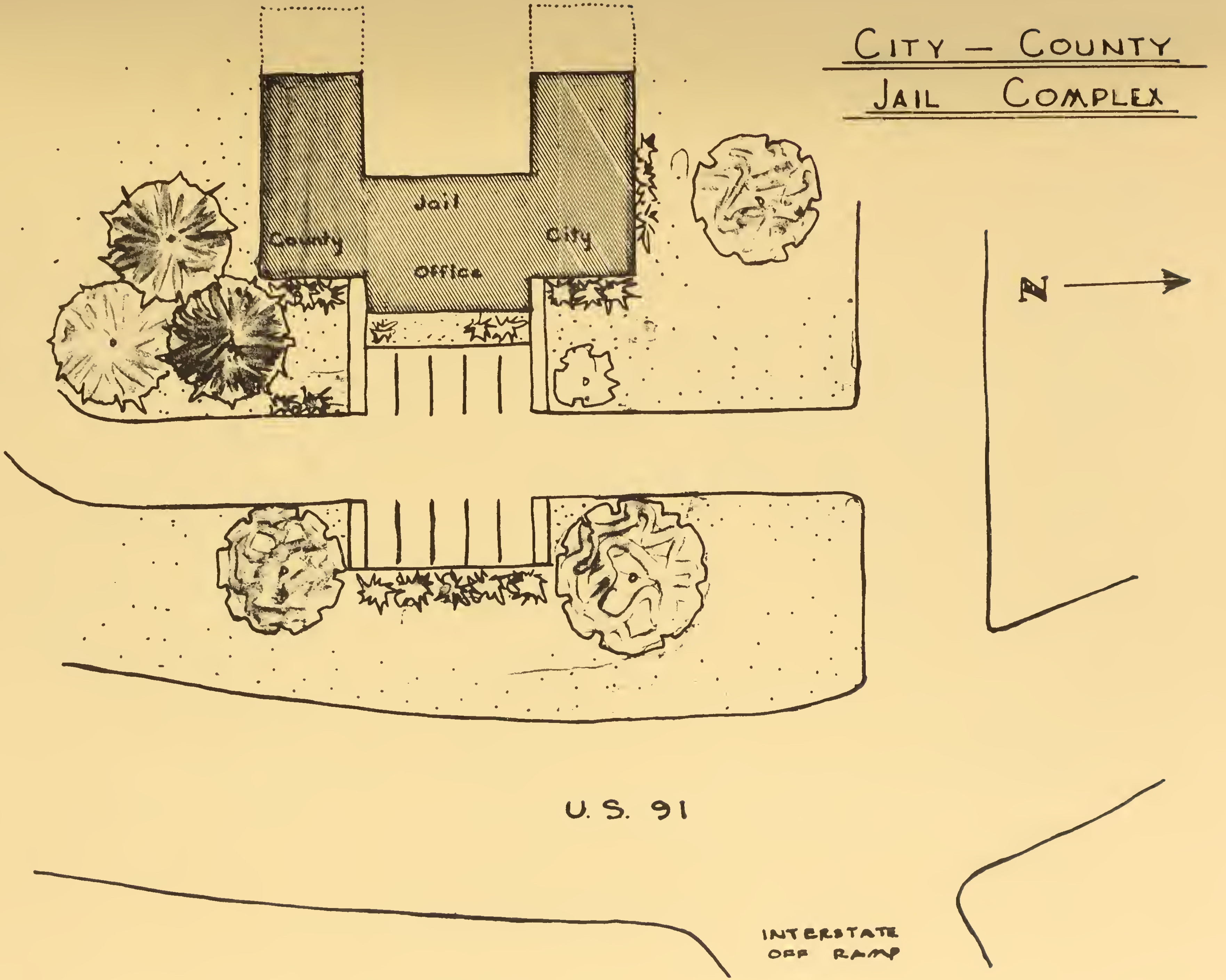

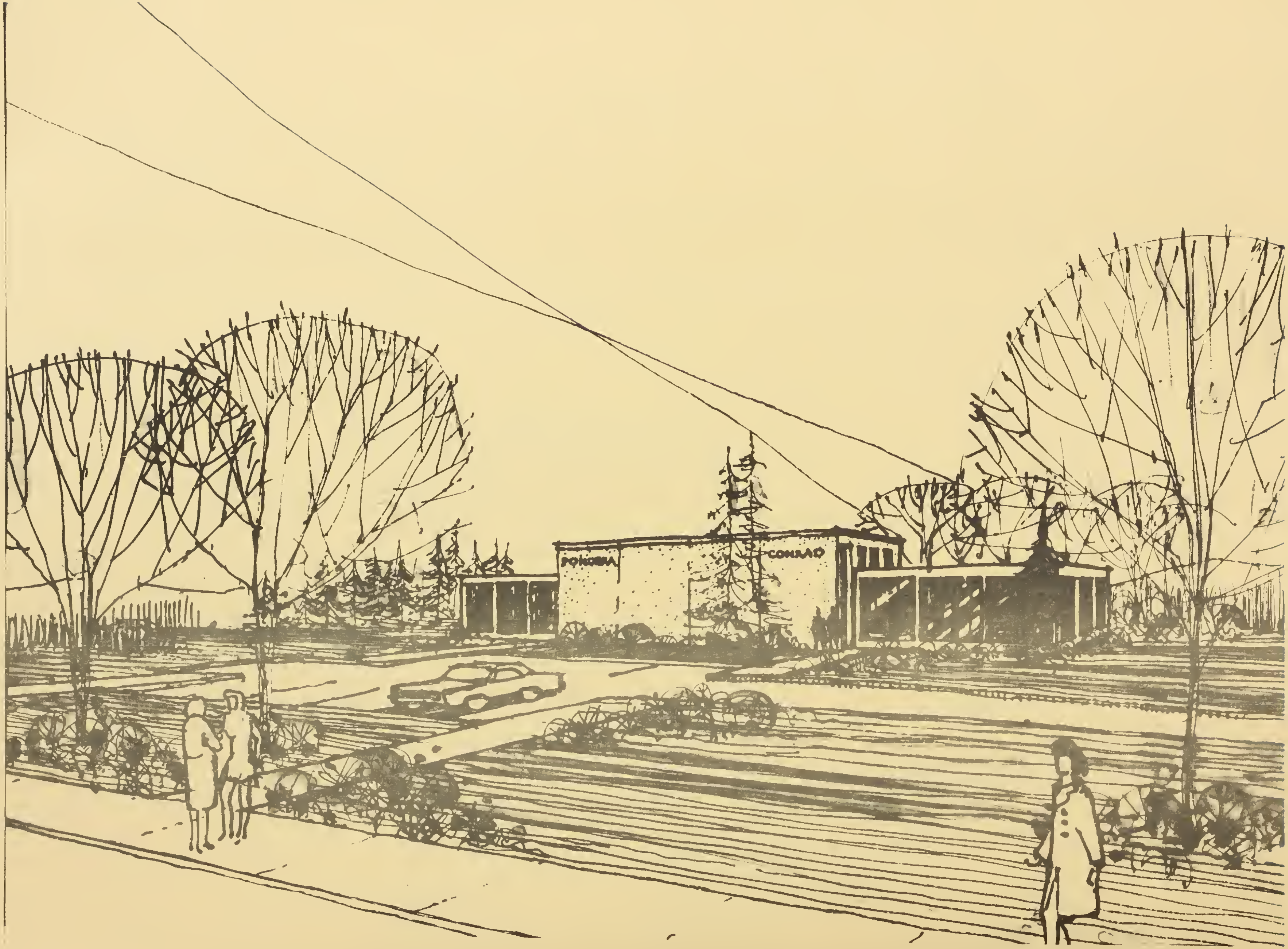
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CONRAD

a major consideration in shopping center placement. These planned improvements will add to the attractiveness of the C.B.D. and increase the adequacy of the area for shopping center location. With the development of such an integrated shopping area, C.B.D. plus shopping center, the attractiveness of Conrad to shoppers will be increased substantially enlarging the pedestrian traffic downtown and the accompanying drop-in trade for both the C.B.D. and the shopping center.

Plan Implementation

The Comprehensive Plan deals with present and future problems relating to the transportation network, land development and redevelopment, utilities, schools, public buildings and services, and the park system. By interrelating and planning the above elements, present problems and future demands are dealt with and a desirable physical environment designed. Upon adoption by the community, the Comprehensive Plan becomes a statement of developmental policy and a guide for future land use and development. The Plan is only as effective as its implementation. Implementation of the plan results from cooperation and coordination among private and public sectors to create a more desirable and healthy community. The following discussed methods are structured means for implementing the plan. Simple community awareness about the plan and a desire by the people to improve the quality of their community's environment are the most effective instruments of change and should underlie all of the following implementation tools.

Planning Board

The Conrad City-County Planning Board has been charged by law to make recommendations and advise presently established boards and officials in regard to the present health and welfare of the region's citizens and to plan for future impacts and developments. The preparation of this report is one step in the carrying out of the Planning Board's responsibility to deal with future conditions in the area. The Planning Board will be instrumental in advising and recommending certain actions that will be undertaken by the governing bodies in the Jurisdictional Area. In execution of the Planning Board's duties, a reputation for consistently giving valid and researched advice will be of considerable import in promoting community support for plan implementation.

Zoning

Zoning is an important legal tool in the implementation of the Comprehensive Plan and in the maintenance of sound community developments and neighborhoods. The zoning ordinance, drafted for the City of Conrad in conjunction with the present study, is based on the objectives and design of the Comprehensive Plan. It is emphasized that while the plan is dimensioned to the year 2000, the zoning ordinance is concerned with immediate conditions and with how present developments can be implemented into the Plan design. Zoning is, thus, a dynamic tool that must be updated periodically to stay abreast of changing conditions and the other plan implementing programs.

Zoning enforcement and administration is a primary determinate of public acceptance of plan implementation. Zoning ordinances deal with individual property rights and while they include restrictions, they guarantee the property owner protection from encroachment of deteriorating and non-compatible land uses. Zoning insures adequate air, light, privacy, and safety in the development of property, guarding community welfare while promoting private development. Impartial enforcement of zoning regulations with fair and unbiased consideration of individual hardship can be a creative force in plan implementation. By protecting property values and maintaining confidence in private property investment, zoning can instill community and neighborhood pride.

The zoning ordinance drafted for the city provides for a zoning Board of Adjustments to deal impartially with individual hardship cases and a separate Zoning Commission to advise changes in the ordinance or zoning districts and thus maintain the zoning ordinance as a viable plan implementing tool. In accordance with Montana statutes, the Planning Board has been designated as the Zoning Commission. Because of its responsibility to advise and make recommendations regarding community welfare and future land use development, the Planning Board should be an integral part of the legal structure of plan implementation.

In accordance with new state statutes zoning districts have been extended to cover the area one mile outside of the city limits in all directions. Zoning in areas adjacent to the city allows for better control of land developments and added insurance that the present healthy growth trend will continue. With this new authority, zoning and planning can work together to develop the total urban area in an integrated and consistent manner.

Subdivision Control

Subdivision control over new developments is another major element in the Comprehensive Plan implementation program. Subdivision ordinances regulate new developments by setting specific standards for building lots and streets, and for site improvements such as sewer lines, water mains, sidewalks, curbs, and gutters. The main impact of subdivision regulations is on vacant land, thus, conscientious administration of the subdivision ordinance in conformance with the Comprehensive Plan can prevent undesirable land use and substandard developments while further implementing the Plan.

The subdivision regulations prepared in conjunction with the Comprehensive Plan have utilized recent state statutes which permit the city to regulate subdivisions outside corporate limits. Other new statutes which enable city and county governments to require subdivisions to conform to the Comprehensive Plan are a further aid in plan implementation.

Urban Renewal

Urban renewal involves replanning an area to create through structural rehabilitation or re-development desirable changes where the quality, type, or extent of development is obsolete, deteriorating, or incompatible with the present environment. In some cases complete rebuilding is required, in other areas only minor surgery is needed. A combination of private and public improvement with federal aid is the best basis for a renewal project.

An area for possible renewal study in Conrad is the area east of the Burlington-Northern tracks. As mentioned previously, a combination city park and private recreational complex is a suggested improvement for part of this area with bordering uses including commercial, industrial, and public shops. A General Neighborhood Renewal Plan might be utilized in rehabilitating the area. Criteria that must be considered before federal aid for redevelopment is approved include: determination of blight, location of adequate and standard facilities for displaced families and businesses, and a marketability study on the land that is to be temporarily acquired by the public agency involved. An alternative or additional source of funding might be available from the Department of Housing and Urban Development's Beautification Program.

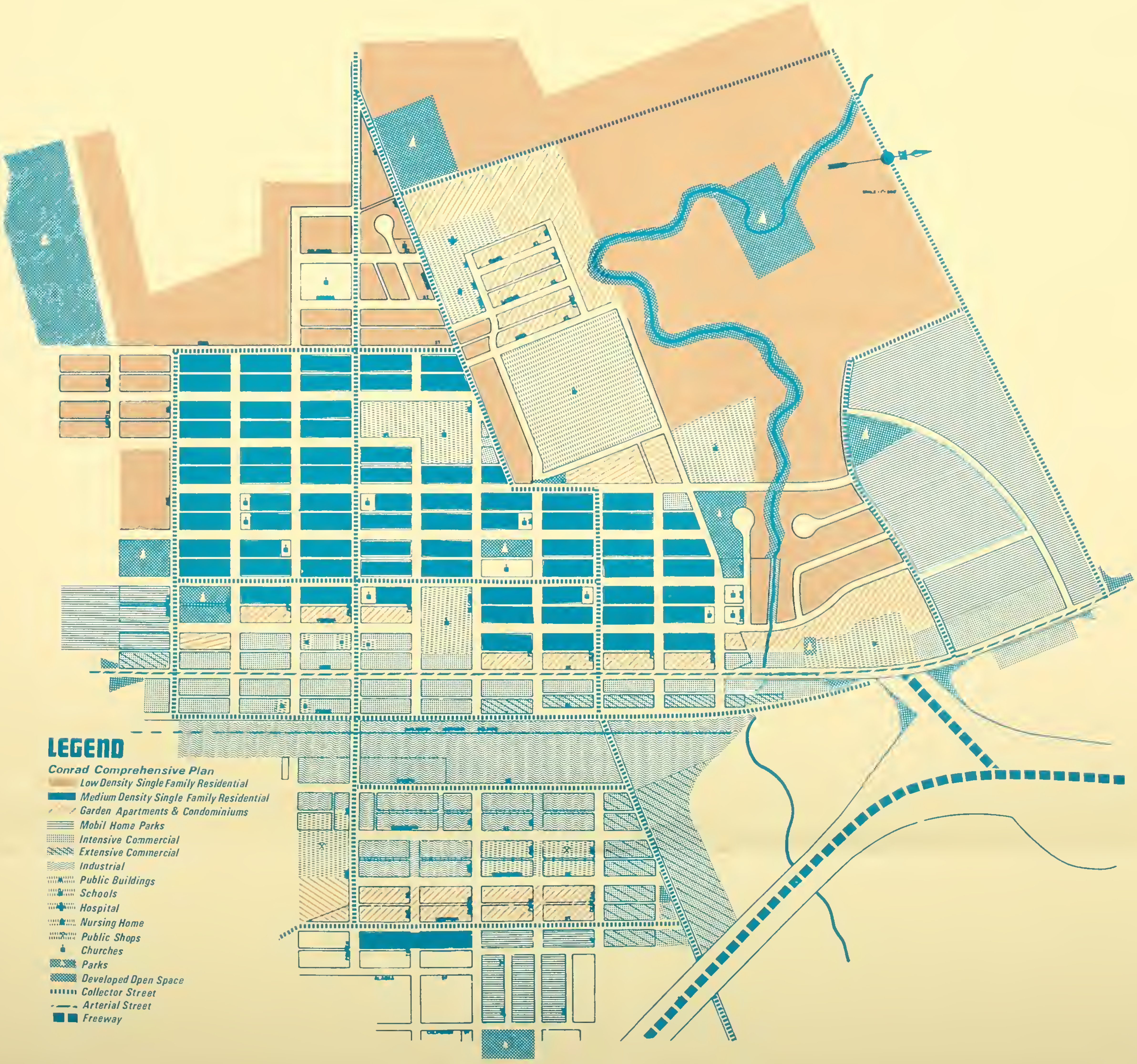
Additional Local Ordinances, Regulation, and Funding

It is recommended that a city ordinance requiring the annexation of areas receiving city services, especially water and sewer, be enacted. The ordinance should be flexible enough to allow for specific exclusions of areas where annexation might be undesirable for the city. With new state regulations permitting regulation by the city of areas adjacent to it, this type of ordinance is oriented more toward returning proper revenues to the city than toward regulating fringe developments as it was in the past.

City financing programs such as special improvement districts, school levys, utility districts, etc., are dissucced in the Capital Improvements Report.

Capital Improvements Program

The capital improvement program is a long range comprehensive fiscal plan. It consists of estimates of expenditures for capital improvements recommended in the Comprehensive Plan. Estimates of revenues from taxes, federal assistance, and other sources are listed. A listing of priorities for capital expenditures and capital improvement cost estimates are the most important elements of such a program. The capital improvements program for Conrad along with possible financing sources is detailed in a separate report.


LEGEND
Conrad Comprehensive Plan
Low Density Single Family Residential
Medium Density Single Family Residential
Garden Apartments & Condominiums
Mobil Home Parks
Intensive Commercial
Extensive Commercial
Industrial
Public Buildings
Schools
Hospital
Nursing Home
Public Shops
Churches
Parks
Developed Open Space
Collector Street
Arterial Street
Freeway